

# **BEST MANAGEMENT PRACTICES PLAN**

**& Individual Permit Application**

**GMD SHIPYARD FACILITY**

**BROOKLYN NAVY YARD, NEW YORK**

U.S. ENVIRONMENTAL PROTECTION  
AGENCY  
2011 DEC 16 AM 9:18  
REGIONAL OFFICE

SUBMITTED TO:

**NEW YORK STATE DEPARTMENT OF**

**ENVIRONMENTAL CONSERVATION**

**Division of Water, Region 2**

OCTOBER 2014

## FACILITY MANAGEMENT POLICY AND CERTIFICATION

GMD Shipyard's management policy is to provide environmentally sound marine ship repair and oil recovery services to enhance efficiency of the world maritime industry. In our endeavor to market and provide our services, we will maintain the highest standards to ensure the environmental health and safety of our employees, subcontractors and customers, the general public, and the environment. Management, skilled craftsmen, and technicians shall conduct ship repair activities in an environmentally safe and responsible manner in accordance this environmental management plan to accomplish these goals. Therefore:

- Each employee is responsible to take every reasonable step to achieve and maintain environmental compliance.
- Environmental performance shall be one of the key factors used during performance review.
- Supervisors at the facility have the responsibility of ensuring environmental compliance and the authority to take corrective action including shutdown of operations, if necessary.
- Management shall promote pollution prevention awareness, self-discipline, and a positive attitude toward the environment.
- GMD Shipyard Corp. shall maintain an open and clear communication with the community.

I hereby certify that this Best Management Practice Plan for GMD Shipyard, Brooklyn, New York, was prepared under my direction and supervision; that I am familiar with the provisions of 40 Code of Federal Regulations 40 CFR 122 (Clean Water Act), and Article 17 (SPDES); and that this plan has been prepared in accordance with good engineering practices.

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Alexander Gomez  
President

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Kevin Nugent  
Pollution Prevention Coordinator

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Date

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Date

## Plan Section

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## 1.0 INTRODUCTION

The U.S. Environmental Protection Agency has developed guidelines for creating a National Pollution Discharge Elimination System (NPDES) permitting system for the discharge of storm water runoff associated with ship building and repairing facilities, under the EPA General Permit. The enactment of Article 17 of the Environmental Conservation Law (ECL) of New York State, entitled Water Pollution Control, authorized the creation of the State Discharge Elimination System (SPDES) program, which is designed to protect New York water's from pollutants.

Information derived from past studies indicated that nonpoint source discharges were contributing significant levels of pollutants to surface waters (Federal Register 11394). Specific non-point sources include storm water runoff, industrial runoff and specific industrial activities, which have the potential to produce pollutants. Consequently, both the NPDES and SPDES permit programs require the development and implementation of "best management practices" to control non-point source discharge of pollutants. As a part of the permit requirements, a best management practice plan must be developed and implemented by the permit holder.

This Best Management Practices Plan (BMP) has been prepared in accordance with good engineering practices for the GMD Shipyard Facility. The BMP Plan establishes source control procedures and practices designed to prevent the discharge of dry dock point sources and storm water pollutants into or upon the navigable waters of the State of New York.

### 1.1 PLAN PURPOSE

The purpose of the Best Management Plan (BMP) is to reduce and eliminate the potential of toxic and hazardous substances from entering the surface waters of New York State. The source control BMPs discussed herein have been developed as a result of a combination of data gathering activities and review of ship repair operations. Data gathering activities include a national literature and policy review, a site assessment, point source and storm water sampling, and ship repair waste minimization studies.

The EPA defines Best Management Practices as "actions or procedures to prevent or minimize the potential for the release of toxic pollutants or hazardous substances in significant amounts to the surface waters" (NPDES BMP Guidance Document, USEPA, 1981). There are two main categories of BMP's: source control BMP's and treatment BMP's. Source control BMP's are designed to prevent surface water pollution by removing the possibility of storm water contact with contaminants. The goal of treatment BMP's is to remove contaminants from the runoff before discharge into surface water.

The BMP's identify in this plan cover management practices that minimize the contact of storm water from potential pollutants. The BMP's identified for Ship Building and Repairing Facilities focus on pollution control, containment of storm water pollutants, cleanup response, personnel training requirements, and the use of standard operating procedures and protocols. Key activities, target pollutants, and BMP's that address each activity at the Facility are summarized in Table 1.

### 1.2 PLAN ORGANIZATION

The BMP Plan is divided into six (6) sections. Section 1, *Introduction*, provides background information about the institution and regulatory statutes plan purpose, and location of the Facility. Section 2, *BMP Committee*, identifies key personnel, their roles and responsibilities, and consistency with overlapping environmental plans. Section 3, *Risk Identification & Assessment*, identifies used and stored materials and compounds, which contain hazardous and toxic materials, and evaluates their potential for contact with storm water. The evaluation includes a discussion of the drainage patterns on-site, and inventory of

significant materials and wastes used and stored, practices for storing, handling and disposal. Section 4, *Best Management Practices*, describes the source control BMP's that will reduce, minimize, and prevent the potential for discharge of pollutants to the surface waters. Section 5, *Emergency/Spill Response Program*, describes notification procedures, emergency response actions/equipment, and record keeping requirements. Finally, Section 6, *BMP Plan Review and Update Procedures*, describes review procedures to update and modify the plan.

### 1.3 Facility Information

The Facility is located at the Brooklyn Navy Yard, Building #595, Brooklyn, Kings County, New York (Figure 1). GMD Shipyard leases 32 acres of property from the Brooklyn Navy Yard Development Corporation, to carry out ship repair services. The Facility consists of Building #595, Berths 7, 8, 9, and 10 and Dry Docks #1, 3, 4, 5, 6 and support buildings. The site topography is flat and completely paved with a mean elevation 9.7ft, approximately 4 feet above mean sea level. The Facility adjoins Wallabout Bay on the Lower East River at Latitude 40°42'00" and Longitude 73°58'00". The Facility address is:

GMD Shipyard  
Brooklyn Navy Yard, Building #595  
63 Flushing Avenue  
Brooklyn, Kings County  
New York 11205

Prior to Hurricane Sandy, October 29, 2012 - and after repairs are made to put discharges back

Outfall Number	Type of Discharge	Longitude/Latitude	Receiving Water
001	Dry Dock 1 Main Pump – w replacement pump	N40°42.118' W073°58.560'	Wallabout Bay East River
002	Dry Dock 1 Drainage Pump – w replacement pump	N40°42.115' W073°58.558'	Wallabout Bay East River
003	Berth 7 Storm Water	N40°42.080' W073°58.385'	Wallabout Bay East River
004	Berth 8 Storm Water	N40°42.138' W073°58.357'	Wallabout Bay East River
005	Dry Dock 5 Drainage Pump –w replacement pump	N40°42.168' W073°58.357'	Wallabout Bay East River
006	Dry Dock 5 Main Pump – w replacement pump	N40°42.172' W073°58.321'	Wallabout Bay East River
010	Graving Dock 6 Main Pump – w replacement pump	N40°42.196' W073°58.346'	Wallabout Bay East River
007	Dry Dock 6 Drainage Pump – w replacement pump	N40°42.196' W073°58.346'	Wallabout Bay East River
008	Berth 9 Storm Water	N40°42.180' W073°58.330'	Wallabout Bay East River
009	Berth 10 Storm Water	N40°42.204' W073°58.304'	Wallabout Bay East River



## Temporary Outfalls used After Hurricane Sandy

Outfall Number	Type of Discharge	Longitude/Latitude	Receiving Water
001	Dry Dock 1 Main Submersible Pump – main discharge of dock	N40°42.118' W073°58.560'	Wallabout Bay East River
002	Dry Dock 1 Secondary Submersible Drainage Pump	N40°42.115' W073°58.558'	Wallabout Bay East River
006	Dry Dock 5 Dual Main Drainage Pumps	N40°42.168' W073°58.357'	Wallabout Bay East River
010	Dry Dock 6 Dual Main Drainage Pump	N40°42.196' W073°58.346'	Wallabout Bay East River
005	Dry Dock #5 Submersible stripping pump discharge	Movable – not fixed	Wallabout Bay East River
007	Dry Dock #6 Submersible stripping pump discharge	Movable – not fixed	Wallabout Bay East River

#### 1.4 FACILITY SECURITY

Dry Dock No.# 1,3,4,5 and 6 are fully fenced and the entrance gates are locked when Facility personnel are not in the area. The Facility maintains a 24-hour security staff in the main yard which covers Dry Dock areas 3, 5 and 6. The areas of Graving Dock 1 and 4 are fully fenced areas that are not covered by full time security. In addition, the Brooklyn Navy Yard maintains a 24-hour security staff at the site. Lighting around Facility and other material storage areas is sufficient at night to deter vandalism and to detect leaks and spills.

The Safety Department will contact qualified personnel for responding to all emergency and spill response events. The New York office contact is Kevin Nugent, Health, Safety & Environmental Director. The Alternate is Eddie Jordan, Security Officer. The company telephone is (718) 260-9200. The Facsimile number is (718) 260-9284.

#### 1.5 PREPARATION AND AVAILABILITY OF BMP PLAN

This BMP Plan has been prepared in accordance with the Code of Federal Regulations 40CFR Parts 122 and 403 and Article 17 of the Environmental Conservation Law of New York State.

The Plan is maintained in the GMD Shipyard office and will be available to the representative of the U.S. Environmental Protection Agency (EPA) and the New York State Department of Environmental Conservation (DEC) during office hours, and all others upon request.

## 2.0 BMP COMMITTEE

The individuals that comprise the Pollution Prevention Team (BMP Committee) were selected based on their familiarity with pollution control and pollution prevention, as well as their day-to-day functional responsibility and their responsibility regarding other environmental management plans in use at the facility. These individuals participate in defining pollution prevention measures and have the authority to execute these measures, as required by the BMP Plan. They are trained and familiar with spill prevention, spill containment, emergency response and pollution prevention best management practices.

### 2.1 TEAM MEMBERS

#### BMP COMMITTEE

Position	Name	Department	Work & Emergency Phone Numbers
Committee Leaders	Alex Gomez	President	(718) 260-9200 (201) 481-9902
Pollution Prevention Coordinator	Kevin Nugent	Health, Safety & Environmental	(718) 260-9200 (347) 675-8876
Spill Response Coordinator	Michael Sanborn	Facility Manager	(718) 260-9200 (917) 415-4626
Member	Chris Iacona	Facility Maintenance	(718) 260-9200 (347) 533-2203

### 2.2 ROLES & RESPONSIBILITIES

The maintenance and updating of this plan is the responsibility of Kevin Nugent who is designated as the alternate qualified individual (QI). All spills and discharges, which may impact storm water at the Facility, are reported to Mr. Alex Gomez (Qualified Individual) who is the designated qualified individuals. The **qualified individual's responsibilities include development, implementation, maintenance, and revision of the Facility's Best Management Plan.**

#### 2.2.1 BMP COMMITTEE LEADER

It is the responsibility of the designated BMP Committee Leader and/or qualified alternate to:

- Maintain a logbook for recording all significant environmental health and safety activities and incident;
- Have authority to suspend work due to environmental and/or safety related concerns, and authority to allocate financial resources to resolve such concerns;
- Provide on-site technical assistance;
- Conduct routine inspections, including equipment maintenance and operation;
- Issue/obtain required work permits;
- Conduct period environmental audits;

- Ensure that appropriate personnel have received the necessary training, including use of containment equipment, control systems and decontamination procedures;
- Provide regular pre-task pollution prevention briefings;
- Review the adequacy of the Best Management Plan;
- Draft necessary amendments to the BMP for review;
- Assure that all authorized site personnel are made aware of the provisions of the BMP and have been informed of the nature of any physical and or chemical hazards associated with the site activities; and
- Maintain control of required documents for recordkeeping purposes.

### **2.2.2 BMP COMMITTEE MEMBERS**

It is the responsibility of the designated BMP Committee members to develop and implement departmental best management practices. Other responsibilities include coordination between departments, tracking of activities, review and update of procedures of management system.

### **2.3 FACILITY PERSONNEL TRAINING REQUIREMENTS**

The Pollution Prevention Coordinator and the Spill Response Coordinator have received 24-hour Occupational Safety and Health Administration (OSHA) hazardous waste operations and emergency response training in accordance with 29 CFR 1910.120 and meet the requirements of 33CFR 154.1026.

Designated facility personnel have received 8-hour OSHA first responder operations level training in accordance with 29CFR1910.120 regulations. New employees that will be involved in OSHA first responder activities will receive this training within one month of beginning work. Additionally, employees are required to undergo four hours of refresher training each year after initial training. Copies of all aforementioned training records are maintained by the Pollution Prevention Coordinator and are available for inspection.

The remedial contractor-of-record for responding to spills and releases is Miller Environmental Group (MEG). MEG personnel are 40-hour OSHA hazardous waste operations and emergency response trained (29CFR1910.120). Annual 8-hour refresher training is required. Training records are kept on-file at MEG's corporate office in Calverton, NY.

### **2.4 CONSISTENCY WITH OTHER PLANS**

The goals and objectives of the Best Management Plan are consistent, and often overlap, with other Environmental Health & Safety Plans at the site. The Facility maintains separate environmental documents and emergency response plans on-site specifically for prevention of spills, handling of fuel oil, and responding to fuel oil spills. These plans are required by federal, state and local agencies include the following:

- GMD SHIPYARD FACILITY RESPONSE PLAN;
- Emergency & Hazardous Chemical Inventory, Community Right-To-Know (SARA Title III);

- GMD SHIPYARD FACILITY FIRE SAFETY PLAN
- Hazard Communications Program.

The BMP Plan may refer to and reflect requirements of these plans under the authority of Section 311 of the Clean Water Act (CWA).

### **3.0 RISK IDENTIFICATION & ASSESSMENT**

This Section presents an assessment of the potential discharges of toxic and hazardous materials to the surface waters of New York State. The assessment includes an inventory of all toxic and hazardous materials used, identification of all exposed materials and wastes, which could contribute to contamination of storm water at the Facility. In addition, each area where these materials are used or stored were evaluated to determine the risk of a release.

#### **3.1 GENERAL FACILITY DESCRIPTION**

The Facility is located at the Brooklyn Navy Yard, Building #595, Brooklyn, Kings County, New York 11205. GMD Shipyard provides both graving dock and topside repair of ships, boats, and barges. The ship repair activities use graving docks typically capable of repairing larger vessels and performing a more diverse range of repair activities than topside repair. These activities occur within the Brooklyn Navy Yard Industrial Park, along Graving Docks (1, 3, 5 & 6), along Berths (5, 7, 8, 9 & 10). The activities occur over, and adjacent to Wallabout Bay. (Graving Dock #4 is not in service)

Primary activities occurring at GMD Shipyard include the following:

- Surface preparation (abrasive and water blasting);
- Surface coating (painting, both brush, roller and spray);
- Engine maintenance;
- Specialty repairs (HVAC, metal fabrication); and
- Vessel cleaning (vessel tanks, etc...)

Potential releases of contaminants from these activities include: petroleum, oil, lubricant (POLs) transfers from engine maintenance and equipment fueling activities; abrasives from surface preparation activities; and paints/thinners from surface coating operations.

#### **3.2 SEWER SYSTEMS AND SITE DRAINAGE**

The Sewer system at the Brooklyn Navy Yard was constructed in 1940's by the Department of the Navy and is currently maintained at the Facility by the GMD Shipyard. The sewer system at the Brooklyn Navy Yard consists of three major subsystems; 1) combined sewer subsystem, 2) Graving Dock pumping and storm drainage subsystem, and 3) storm drain subsystem. The combined sewage system at Dry Dock No. 3, 5, & 6 is part of the Brooklyn Navy Yards eastern subsystem that flows to the Newtown Creek Waste Water Pollution Control Plant along Kent Avenue. The combined sewerage system at Graving Dock No. 1 is part of the western subsystem that flows to Red Hood Waste Water Pollution Control Plant along Morris Avenue within the boundaries of the Navy Yard. (DD#4 is out of service.)

Storm Water drainage subsystem along the waterfront areas discharges into the East River through discrete outfalls located at the end of the berths. The dry dock pumping and storm drainage subsystem are equipped with pumping stations to drain dry docks to allow for ship repairs. The Site Drainage Distribution Systems are presented in Figure 2 & 3.

### 3.2.1 COMBINED SEWER SYSTEM

Graving Dock No.'s 5 & 6 are located in the eastern combined sewerage subsystem which collects sewerage from the buildings located on the berths and conveys flow to the Kent Avenue twin barrel interceptor (168 inch by 138 inch), and is directed to Newtown Creek Water Pollution Control Plant via a 72 inch interceptor sewer. The combined sewer system discharges sewer and storm water from Dry Docks 5 and 6 and a portion of Berth No. 9 are conveyed via an 8-inch force main to the Brooklyn Navy Yard eastern combined sewer system.

Graving Dock's No 1 and 4 are located in the western combined sewerage subsystem, which collects sewerage and storm water from southeastern side of Dry Dock No. 1 and conveys the flow through an 88" x 84" brick sewer to Red Hook Waste Water Pollution Control Plant.

### 3.2.2 GRAVING DOCK DRAINAGE SYSTEM

Graving Docks No.'s 1, 5 and 6 are three operational graving docks at the facility. The operational graving docks are used for "bottom and side" repair and inspection services. Graving Dock No.'s 5 & 6 had been pumped through a common pump station, which had removed the tidal water (130,000 gpm) from within the dry docks (Figure 4) prior to Hurricane Sandy. (As of this writing, the main pumps are OOC due to hurricane SANDY flooding). Graving Dock's #5 and #6 are now using two movable 6,000 GPM submersible pumps. Each time Graving Dock #5 or #6 is pumped these pumps are shifted to the designated dock. Graving Dock No. 1 had been discharged by a dedicated pump that had evacuates tidal water (12,000 gpm) to the East River, this pump was also damaged by Hurricane Sandy. (As of this writing, this pump system is out of service due to hurricane SANDY flooding). Now, the dock is discharged using a temporary movable pump to discharge the dock at about 6,000 GPM. Graving Dock No. 3 is used solely as a wet berth for "topside" repair activities and is not used as a Graving Dock. No dry dock pumping system or drainage system is operational at lay berth No. 3. Graving Dock No. 4's fixed pumps are also OOC due to flooding of the dock prior to Hurricane Sandy. At this writing there is no plan to use Graving Dock #4 as a Graving Dock.

During dry dock filling operations, the original pump system intakes are open allowing tidal water from the East River to fill the Graving Docks (figure 5). The filling of the dry docks is accomplished by equalizes the hydrostatic pressure on the caisson gate allowing it to be opened and ships to enter or exit.

During all Graving Dock emptying operations, after the temporary main pumps are installed in the dock and water is discharged down to the four (4') foot level there are other temporary movable sump pumps placed into the main pump sumps. The Graving Dock sump pumps withdraws water from under the expanded metal intakes located on the floor of the dry docks and discharges the water into the East River (Figure 6). These pumps can strip the graving dock dry.

Due to dry dock caisson leakage and other operations water collects in the graving dock sump drain and is pumped out using "sump pumps". These pumps have float switches and discharge water via an 8 inch pipe to the East River. During repair operations and activities the dry docks are drained through "sump pumps" that keep the dry dock free of water from rainfall events. The dry docks are sloped to the caisson gate to facilitate water conveyance to the stripping pumps via drainage channels that run the length of the dry docks (Figure 2 & 3).

The dry dock pump systems are presented below:

- Graving Dock No. 1 Main Pump and Drainage Pump (outflows 001 & 002)

- Graving Dock No. 1 (the main pumping system which is fixed had been rated at 16,000 gpm). Since SANDY the shipyard is using a removable discharge pump which discharges at 14,000 GPM. The discharge outflow (outflow No. 001) is located at Longitude N40°42.115' and Latitude W073°58.558' along the outboard (waterside) of the Graving Dock. The main pump evacuates approximately 4 million gallons of tidal water during operation.
- The drainage pumping system is rated at 3,000 gpm. The drainage discharge outfall (Outfall No. 002) is located at Longitude N40°42.115' and Latitude W073°58.557' along the outboard (waterside) of the dry dock. The drainage (stripping) pump evacuates storm water during the repair activities, to ensure safety. The drainage pump represents the worst case scenario for potential pollutant loading. These drainage pumps were sampled as part of the risk assessment of the Facility. During SANDY the fixed stripping pump was damaged. The dock now has a movable stripping pump with discharge of approximately 3000 GPM.
- **Graving Dock No.'s 5 & 6 Main Pump and Drainage Pump (Outfalls 005, 006, & 007, 010)**

Prior to hurricane SANDY Graving Dock No. 5 & 6 were served by a common pumping system that is rated at 130,000 gpm. After hurricane SANDY these two docks use two movable pumps with a combined discharged rate of 48,000 GPM. The discharge outfall for these two movable pumps at GD#5 is outfall number 006, For GD#6 is outfall number 010,. They discharge over the caisson gates of both graving docks #5 and #6. When discharged each graving dock #5 and #6 hold about 12,000,000 gallons of water.

Each Graving Dock is served by a discrete drainage sump pumping system that is rated at 700 gpm. The drainage discharge for Graving Dock No. 5 (outfall no. 005) is located at Longitude N40°42.168' Latitude W073°58.357' and for Graving Dock No. 6 (outfall no. 008) is located at Longitude N40°42.196' Latitude W073°58.346' along the outboard (waterside) of the dry docks. The drainage pump evacuates storm water during the repair activities, to ensure safety. The drainage pump represents the worst case scenario for potential pollutant loading. These drainage pumps were also sampled as part of the risk assessment of the facility.

Regular maintenance of the pumping system is conducted by GMD Shipyard personnel to maintain Department of Navy "Dry Dock Safety Certification." Prior to flooding, the dry docks are inspected and cleaned to prevent contact of tidal water with potential pollutants.

### 3.2.3 STORM DRAINAGE SYSTEM

Storm water drainage at the site includes storm water runoff from 21.4 acres of paved open areas and building roofs on the berths at Dry Dock No. 3, 5 & 6. Sheet runoff from storm sewer outfall located at the end of each respective berth. The storm sewer subsystem consists of 62 concrete drainage structures and 2 miles of storm drain lines. Storm drain lines are constructed of reinforced concrete and vitrified clay.

Storm water drainage at Graving Dock No. 1 includes storm water runoff from less than one acre of paved open areas. Sheet runoff from storm water events are diverted to catch basins along the west side of the dry dock. **However, these catch basins have been plated and are no longer functional.** This subsystem had discharged runoff into East River through Main Pump outfall (Outfall 001) located at the end of berth. The main pump is no longer operational. The eastern catch basins along Graving Dock No. 1 divert storm water to the Navy Yard combined CSO that flows to Red Hook Sewage Plant. The storm sewer subsystem consists of 12 concrete drainage structures and ¼ mile of storm drain lines. Storm drain lines and the main pump discharge culvert are constructed of vitrified clay and brick structures, respectively.

The storm water system inventory and capacity analysis is presented in Table 2.

- **STORM WATER OUTFALL 003**

**This outflow is not on GMD Shipyard property. There are only two storm drains catch basins on GMD Shipyard property associated with this Storm Water Outflow.**

SPDES discharge Outfall 003 discharges storm water collected from Berth No. 7. This subsystem discharges runoff into East River through a separate storm sewer outfall. The total area (Berth No. 7) drained by this subsystem is about 2.37 acres.

The storm sewer consists of about ten (10) brick and concrete drainage structures and 0.17 miles of conduits. The storm drain conduits are constructed of vitrified clay. The conduit diameters range from 10 to 15 inches.

Outflow 003 includes storm water from paved open areas and building roofs. No industrial activities occur along Berth No. 7. The outfall location is Longitude N40°42.080' and Latitude W073°58.558'. This discharge is designated as Outfall 003 in the SPDES application.

**STORM WATER OUTFALL 004**

SPDES discharge Outfall 004 discharges storm water collected from Berth No. 8. The total area (Berth No. 8) drained by this subsystem is about 9 acres.

The storm sewer consists of about twenty-five (25) concrete drainage structures and 0.51 miles of conduits. The storm drain conduits are constructed of reinforced concrete. The conduit diameters range from 12 to 24 inches.

Outfall 004 includes storm water from paved open areas and building roofs. Industrial activities, which occur along Berth No. 8, include sand blasting, surface coating, and metal fabrication operations. The outfall location is Longitude N40°42.138' and Latitude W073°58.357'. This discharge is designated as Outfall 004 in the SPDES application.

**STORM WATER OUTFALL 008**

SPDES discharge Outfall 008 discharges storm water collected from the western portion of Berth No. 9. The total area (Berth No. 9) drained by this subsystem is about 6.27 acres.

The storm sewer consists of about twenty (20) concrete drainage structures and 0.36 miles of conduits. The sewers are constructed of reinforced concrete. The conduit diameters range from 12 to 24 inches.

Outfall 006 includes storm water from paved open areas and building roofs. Industrial activities, which occur along Berth No. 9, include sand blasting, surface coating, fuel oil storage, and waste material operations. The outfall location is Longitude N40°42.180' and Latitude W073°58.330'. This discharge is designated as Outfall 008 in the SPDES application.

**STORM WATER OUTFALL 009**



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**STORM WATER OUTFALL 009**

SPDES discharge outfall 009 discharges storm water collected from the western portion of Berth No. 10. The total area (Berth No. 10) drained by this subsystem is about 3.43 acres.

The storm sewer consists of about fifteen (15) concrete drainage structures and 0.25 miles of sewers. The sewers are constructed of reinforced concrete. The storm water conduit diameters range from 12 to 24 inches.

Outfall 009 includes storm water from paved open areas and building roofs. Industrial activities, which occur along Berth No. 10, include sand blasting, surface coating, fuel oil storage, and waste material operations. The outfall location is Longitude N40°42.204' and Latitude W073°58.304'. This discharge is designated as Outfall 009 in the SPDES application.

Storm water designated Outfall No.'s 003, 004, 008 & 009 were previously sampled as part of the Storm water permit application in 1998. Storm water outfall 003 was sampled in 2003 to confirm that no storm water was entering the system, as identified. Results from this discharge are representative of the water quality of the East River.

**3.3 HAZARDOUS MATERIAL INVENTORY AND STRUCTURAL CONTROLS**

This section provides an inventory of the potential sources of toxic and hazardous materials that may be released during ship repair activities. In addition, potential sources that can contribute to the mass loading have been included which include exposed materials and wastes.

As part of the New York State Pollutant Discharge Elimination System (SPDES) application, an Industrial Chemical Survey (ICS) was performed at the Facility. The ICS form present a list of substances of concern, substance classification, and the quantities used and stored at the Facility. Chemical data was collated from the Material Safety Data Sheet (MSDS) on-file, to complete ICS form. The ICS application form and pertinent MSDS sheets are presented in Table 4.

Potential sources of toxic and hazardous materials that may be released to the waters of New York State include:

- Marine paints and thinners from surface coating operations;
- Spent abrasives and exposed materials and waste from stockpile storage areas;
- Petroleum from fuel oil storage in aboveground storage tanks and 55-gallon drums;
- Petroleum, oil and lubricants from shipboard engine maintenance activities;
- Miscellaneous hydraulic/lubricating oils from equipment maintenance activities; and

A description of each material and waste storage system and their requisite structural controls are presented below.

**3.3.1 MARINE PAINTS AND THINNERS**

The facility maintains a State Facility Air Permit ID 2-6101-00369/00001 pursuant to TITLE V of the federal Clean Air Act for all surface coating operations. Specialty marine paints used include alkyds, epoxy, inorganic zinc, anti foulant and limited use of paint

thinners. Paints used on-site are certified low volatile organic compound (VOC) formulated paints to ensure compliance with the permit.

Paint material purchases and utilizations are carefully controlled to minimize the quantity stored on-site and therefore the potential for contamination. Paints are purchased and supplied to the facility on an as-needed basis from the manufacturer. Paints are temporarily stored and mixed in containment systems designed to prevent contact with storm water runoff. These paints contain hazardous constituents, and any release will be treated and remediated, as if they were an oil spill.

### **3.3.2 SPENT ABRASIVES AND EXPOSED MATERIALS AND WASTES**

Surface coating operations require surface preparation of ship hulls and deck areas by either Ultra High Pressure (UHP) water blasting or sand blasting with abrasives prior to painting. All ships serviced are required to provide information regarding the paint to be removed as part of the contract with the Facility. Characterization of surface coatings are most commonly determined by information supplied in the Material Safety Data Sheet (MSDS) of the paints, or by conducting TCLP metal analysis of the paints. Paint chips and spent abrasive do not exhibit hazardous waste characteristics, but will contribute to an increase in the total mass loading of metals, if not appropriately managed. All spent abrasive materials are removed from graving docks and when not immediately removed for disposal they are stockpiled in a designated waste grit area in the main shipyard. The grit stockpiled is blocked in using large brick blocks and also surrounded with hay bales. The pile is also covered with tarps awaiting transit. This to keep the affects on storm water to a minimum.

Storage of waste materials typically includes spent abrasives, sediment, scrap metals, and refuse. The Facility provides proper solid waste disposal facilities to service workers and vessel owners docked at the Facility. Covered dumpsters and other covered receptacles are provided at the facility. Scrap metal is collected by facility staff and placed into 40-yard containers for metal recycling by a licensed firm.

Spent abrasive materials generated by surface coating operations are removed from graving docks and stockpiled in cement and hay lined areas. This pile is also tarped to prevent contact with storm water.

### **3.3.3 PETROLEUM, OIL AND LUBRICANTS**

The fuel oil is loaded into one 3300 gallon mobile fuel truck on sight. When necessary the facility rents double wall mobile tanks of various capacities for ship engine repair and maintenance activities. New hydraulic oil and lubricants are stored in 55 gal drums located in storage racks with spill containment in the mechanic shop. There is also a rack in the machine shop to keep a drum of lubricating oil for the lathes and other machines.

#### **Mobile Waste Oil Storage:**

In the event that the shipyard is involved in removing waste oil for storage to return to the vessel, a rented double wall tank will be arranged for. In the event that the shipyard is involved with the removal of waste oil for disposal, the waste oil will be place in 55 gal drums or 350 gal plastic totes. When full, these will be moved to the secured drum storage area. The 55 gallon drums and totes are used for temporary storage of petroleum liquids. These will be stored in our secure storage area pending removal for disposal.

#### Temporary Waste Oil Storage:

During ship refurbishment repair, contract work may require greater storage capacity of petroleum liquids than is provided for at the shipyard. This special case situation shall be accommodated by the use of leased tanks/containment systems from a variety of vendors. GMD Shipyard shall retain the services of Baker Tanks, #2 Lakeview Ave., Suite 208, Piscataway, New Jersey, to provide temporary storage capacity on a contract dependent basis. Storage shall be provided by the following tank systems or combination thereof:

- 1) Total Drain Polyethylene Tanks, 4,000 & 6,500 gallon capacity tanks with secondary containment berm systems with a 7,500 gallon capacity. The 60 ml polyethylene liner system is compatible with the material to be stored. Large tank systems shall require that fill gauging be provided by visual methods.
- 2) FRAC Tanks, 20,000 gallon capacity tanks with level gauge system. Frac Tank systems shall require that secondary containment be provided through the use of a 2,000 gallon overspill designed for that system.

An aboveground tank inventory including materials of construction, product level measurement methods, and secondary containment details are presented in Table 6.

### **3.4 POTENTIAL POLLUTANT SOURCES AND DISCHARGE PATHWAYS**

There are three (3) potential discharge pathways for accidental releases occurring at the Facility: (1) discharge to East River via storm drainage system, 2) discharge to the East River via dry dock drainage pumps (worst case) and 3) discharge to Newtown Creek Water Pollution Control Facility (WPCF) via the combined sewer system.

#### **3.4.1 STORM WATER DISCHARGE TO EAST RIVER**

Potential discharges from spills and storm water will be conveyed through the storm water drainage subsystem located along Berth No.'s 5, 7, 8, 9 and 10. Storm water discharges will occur at designated outfalls 003, 004, 006, and 009 to the East River. BMP's identified in the plan cover management practices that minimize the contact of storm water with potential pollutants. The BMP's identified for Ship Building and Repairing Facilities focus on pollution control, containment of storm water pollutants, cleanup response, personnel training requirements, and the use of standard operating procedures and protocols.

#### **3.4.2 DRY DOCK DRAINAGE DISCHARGES TO EAST RIVER**

Potential discharges of particulates (sandblast) and from petroleum and paints will be conveyed through the dry dock drainage system located in Dry Dock No.'s 1, 5, and 6. Drainage discharges will occur at designated outfalls 002, 005 and 008 to the East River. BMP's identified in this plan cover treatment and management practices that minimize the contact of storm water with potential pollutants. The BMP's identified for the Ship Building and Repairing Facilities focus on pollution control, containment of storm water pollutants, cleanup response, personnel training requirements, and the use of standard operating procedures and protocols.

#### **3.4.3 DISCHARGES TO NEWTOWN CREEK WPCF**

Sanitary services located in the buildings at the Shipyard, which include toilets, floor drain discharges are conveyed through the BNY combined sewer system and treated at either Red Hook or Newtown Creek WPCF. In addition, storm drains on the north side of berth 9 and south side of Dry Dock No. 1 drain into the BNY combined sewer system. Other possible discharges containing toxic and hazardous materials include spills during transfer operations or storm water from areas outside the containment structures, which may be contaminated with residual material(s).

#### 3.4.4 TEST FOR ELICIT PATHWAYS

In June 1997, a sewer system evaluation was conducted at the BNY Facility by the engineering firm of Parsons, Brinkerhoff, Quade & Douglass, Inc. Engineers. The sewer system evaluation includes a visual inspection and dye-testing program of all subsystems. Results from the study were used to generate the Facility Drainage Plan, which is presented in Figure 2 & 3. Dye tests confirmed the direction of flow of the storm drainage subsystem, the combined sewerage subsystem, and the Dry Dock drainage subsystem.

#### 3.4.5 DRY DOCK DRAINAGE SYSTEM & STORM WATER SAMPLING AND ANALYSIS

On February 2 and March 11, 2003, Quay Consulting LLC conducted dry dock drainage and storm water sampling of Dry Dock No.'s 1, 5 & 6. The purpose of the sampling event was to determine the effluent quality from the drainage discharges. The dry dock drainage "stripping" pump effluent has been determined to be the worst-case scenario for contribution of contaminants due the potential of storm water during ship repair activities and their potential pollutants. Results were statistically compared to background East River water quality to determine whether dry dock effluent may be contributing contaminants that may have a mass loading effect on the East River.

Drainage pump discharges were collected by grab sampling from the discharge ports of the drainage system(s), prior to entering the East River. Samples were transferred to certified pre-cleaned sample containers and shipped under stringent chain-of-custody to the analytical laboratory.

Effluent samples were delivered to Environmental Testing Laboratories, Inc. (NYS Lab. I.D. #10969), under stringent chain-of-custody protocols. Effluent and surface water quality samples were analyzed for the following parameters:

No.	Parameter	Type	EPA Method	Detection
1	pH	Grab	150.1	EPA min.
2	Temperature	"F"	After Collect	EPA min.
3	Fecal Coliform	Grab	5 tubes/3 dilution	EPA min.
4	Oil & Grease	Grab	413.1	EPA min.
5	BOD <sub>5</sub>	Grab	405.1	EPA min.
6	Suspended Solids	Grab	160.2	EPA min.
7	Settle able Solids	Grab	160.5	EPA min.
8	Chlorides	Grab	325.1-3	EPA min.
9	Benzene	Grab	602	EPA min.

10	Toluene	Grab	602	EPA min.
11	Xylenes	Grab	602	EPA min.
12	Ethyl benzene	Grab	602	EPA min.
13	PCBs	Grab	608	EPA min.
14	13 Priority Metals	Grab	200 Series	EPA min.
15	Acid Base /Neutrals	Grab	625 GC/MS	EPA min.
16	Halogenated Volatiles	Grab	601 GC	EPA min.
17	Nitrate / Nitrite	Grab	353 / 354	EPA min.
18	Aromatic Volatiles	Grab	602 GC	EPA min.
19	Cyanide	Grab	335.2	EPA min.

The data summary results are presented in Table 3. Laboratory Data sheets are provided in Appendix I. Data results for effluent from the dry dock drainage (Outfalls 002, 005 and 008) reported no volatile, semi volatile and PCBs were detected above the Method Detection Limit for every compound. Semi volatile data detected phthalates to sampling and laboratory artifacts. Phthalates are present in sample gloves used in the field and laboratory.

Metal analytics reported in the effluent samples were at background surface water quality levels. No cyanide was reported in any of the collected samples.

Conventional parameters of pH, temp, chloride, nitrate/nitrite, settle able/suspended, fecal coliform, BOD, oil and grease were also at background surface water quality of the East River.

A statistical analysis of the effluent data was used to compare against background surface water quality levels to determine if the effluent has the potential to contribute a mass loading effect. Statistical analysis of the mean, variance, standard deviation and upper 90% confidence level were calculated for the effluent quality and then raw data compared to background surface water quality. For metal analytics, volatile and semi volatile, and PCB compound data there was no significant statistical difference reported when compared to surface water quality. The variance and standard deviations were insignificant for reported analytes and compounds.

The greatest variability in variance and standard deviation were reported for the following conventional parameters: fecal coliform, chlorides and oil & grease. Of note, the oil and grease data varied significantly around the mean. Review of the volatile and semi volatile data (PAH) demonstrate that these compound were not related to petroleum products (diesel or gasoline derived organics), since no volatile or PAH concentrations were reported. The presence of oil and grease in surface water quality indicates the presence of natural background concentrations and not petroleum products utilized in the ship repair activities.

The results presented indicate that there is no significant mass loading effect to surface water quality from drainage discharges and storm water from the activities and operations of the ship repair facility.

Previous storm water quality data was presented in the "Best Management Practices Plan, GMD Shipyard, July 1998 which has been updated to October 2014.

### **3.5 RISK ASSESSMENT SUMMARY**

Based upon the materials used and stored, existing structural and management controls, and the configuration of the Facility drainage system; the potential for discharges and releases of toxic and hazardous materials to surface waters is considered limited. Results of the dry dock drainage system (worst case scenario) and previous storm water sampling demonstrate that there is no significant mass loading effect to surrounding surface water at the site.

The facility uses limited toxic and hazardous materials. These materials include paints and thinners used during surface coating activities. Other regulated materials which are not defined as toxic and hazardous (6 NYCRR Part 361) include fuel oil, hydraulic oil, and miscellaneous lubricating oils and greases. In addition, storage of exposed stockpiles of spent abrasives and sediment that may contribute to mass loading in storm water runoff, if not properly contained.

The major pollutant –generating activities occurring at the Facility with dry docks include surface preparation, painting, engine maintenance, specialty repairs (metal fabrication), and vessel cleaning. Potential pollutants originating from these activities include paint particles, spent abrasives, thinners, petroleum products, and shipboard wastes (bilge and process water). Best management practices for this industry focus on containment of potential pollutants, cleanup practices, and personnel training to minimize impacts to surface water quality.

## **4.0 BEST MANAGEMENT PRACTICES**

This section presents the Best Management Practices for GMD Shipyard which will be implemented to reduce or minimize the potential for discharges or releases of toxic or hazardous materials to the waters of New York State.

The BMP's identified in this plan cover management practices that are designed to minimize the contact of storm water with potential pollutants, to eliminate surface water quality impairment. The BMP's identified for the Ship Building and Repairing Facilities focus on pollution control, containment of storm water pollutants, limited treatment, cleanup response, personnel training requirements, and the use of standard operating procedures and protocols. Key Activities, target pollutants, and BMP's that address each industrial activity at the Facility are presented and summarized in Table 1.

### **4.1 GOOD HOUSEKEEPING PRACTICES**

Good Housekeeping practices are designed to maintain a clean and orderly work environment at the facility. The most effective step towards preventing pollution of storm water from industrial activities simply involves using common sense to improve the Facility's basic housekeeping methods. A clean and orderly work area reduces the possibility of accidental spills caused by mishandling of chemical and equipment and will reduce safety hazards to facility personnel.

With regard to the hazardous materials identified in Section 3.3 of this Plan, the identified good housekeeping practices recommended for minimizing discharges of pollutants include improved operation and maintenance of industrial machinery and processes, material storage practices, material containment procedures, material transfer operations, material inventory controls, routine and regular clean-up schedules, maintaining well organized work areas, and employee training about all related practices.

#### **4.1.1 OPERATIONS AND MAINTENANCE**

The implementation of these practices are designed to ensure that process and equipment work well. The following good housekeeping practices are conducted at the Facility:

- Maintain dry and clean floors, ground surfaces, dry dock floors, and storm drains by using brooms, shovels, vacuum cleaners, and cleaning machines prior to and after ship docking;
- Regular pickup and disposal of garbage and waste materials;
- Make sure equipment is working properly before use;
- Routinely inspect for leaks and conditions that could lead to discharge of chemicals or contact with storm water with raw and waste materials;
- Ensure that employees understand spill cleanup procedures.

#### **4.1.2 MATERIAL STORAGE AND CONTAINMENT PRACTICES**

Proper material storage and containment practice is designed to prevent release of materials and chemicals that can cause storm water runoff and dry dock drainage effluent pollution. The following storage and containment practices are conducted at the Facility:

- Provide adequate aisle space to facilitate material transfer and easy access for inspections;

- Storing Chemical (paints and thinners) and petroleum product containers on containment systems, secondary containment, will prevent accidental leaks and spills. Secondary containment at the Facility of all liquids is designed to prevent spill and leaks from impacting surface water quality. Containment structures are located away from direct traffic routes to prevent accidental spills (see BMP 4, presented in Table 1).
- Storing liquid containers on containment pallets or similar devices to prevent corrosion of containers, and subsequent loss of integrity that could result in a leak or spill. (See BMP 9, present in Table 1).
- Where feasible, containment of raw or waste material(s) will be covered, to prevent storm water contact.
- The Pollution Prevention Coordinator is assigned the responsibility of compiling the hazardous material inventory (see Section 4.1.4 – Material Inventory and Purchasing).

#### **4.1.3 MATERIAL TRANSFER PRACTICES**

Proper material transfer practices will prevent release of materials and chemicals that can cause storm water runoff and dry dock drainage pollution. The following material transfer practices are conducted at the Facility:

- For fuel oil storage, all fuel transfers are the responsibility of the delivery person who supplies the fuel oil and a shipyard designated person to receive the fuel. No delivery is to fill any tank over the 95% level. At this time the only tank in the facility is a mobile fuel truck.
- Upon arriving at the site, all delivery personnel will be logged in at the GMD Security gate. No visitors are allowed to conduct business at the Facility without being signed into the visitor log;
- As a quality assurance measure, the Shipyard General Manager will insure that the maintenance department works with the fuel delivery personnel. Assigned plant personnel are responsible to ensure that both the vendor and any other personnel assisting with the off-loading process wear proper personal protective equipment. Shipping documents are checked to verify the type and quality of the fuel or chemicals to be received prior to the transfer;
- The shipyard designated fuel person, a maintenance department member, will verify the product level inside the tank during transfer operation by manually gauging the product by monitoring the sight gauge or physically gauging the tank. No tank is to be filled above the 95% level.
- When filling a tank, a gate valve is located on each tank connection as close as practical to the tank, in accordance with the National Fire Protection Association No. 30. These valves are closed when transfer operations are not being conducted;
- There are no tanks now designated for oil storage. In the event the yard intends to fill any storage tanks temporarily, those tanks will need to be inspected on a monthly basis and integrity tested every ten years (See Section 4.3 – Preventive Maintenance and Inspections).

#### **4.1.4 INVENTORY CONTROL AND PURCHASING PROCEDURES**

Proper inventory control procedures will provide an up-to-date inventory of all materials stored (hazardous and non-hazardous) at the Facility. This inventory will identify which



materials and activities pose the greatest risk to the environment, track how materials are stored and handled on-site, and reduce the costs by overstocking. The Material Inventory is presented in Table 5.

Purchasing procedures require that all vendors provide a Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) on all materials delivered to the Facility. Information contained on MSDS allows the Pollution Prevention Coordinator to determine whether or not the Facility will generate hazardous waste. The following inventory control practices are conducted at the facility:

- Materials are ordered on an as-needed basis to prevent overstocking and disposed of outdated materials;
- The tool room (supply room) is trained to recognize when to notify the Pollution Prevention Coordinator when hazardous materials arrive at the shipyard.
- Labeling of all containers to show the name and type of substance stored, stock number, and expiration date, health hazards, suggestion for handling, and first aid information;
- Clearly mark on the inventory hazardous materials that require special handling, storage, use and disposal consideration;
- Determine whether material substitution from a hazardous to a non-hazardous material can be accomplished. Substitution of solvents, paints, and other materials for less toxic materials can reduce potential impacts to storm water and increase recycling potential of spent materials.

#### **4.1.5 EMPLOYEE PARTICIPATION**

Employees will be trained in good housekeeping techniques to reduce the potential of materials and equipment to be mishandled. Motivation of employees to reduce waste generation and increase recycling is key to the facility pollution prevention training.

#### **4.2 PREVENTIVE MAINTENANCE AND FACILITY INSPECTION**

Preventive Maintenance involves the regular inspection and testing of plant equipment and operational systems. These inspections will identify conditions such as cracks or leaks which could cause breakdown or failure that may result in discharge and spills to waters of New York State. The program is designed to prevent breakdown and failures by adjustment, repair or replacement of equipment and systems. The preventive maintenance program includes the following tasks:

- Identification of equipment, systems, and Facility areas that should be inspected;
- Schedule periodic inspections or tests of equipment and systems;
- Appropriate and timely adjustment, repair or replacement of equipment and system;
- Maintenance and complete records of inspections, equipment, and systems.

The Pollution Prevention Coordinator will report to the facility President when the Facilities Maintenance Department needs to perform unscheduled maintenance to on-site equipment including; aboveground storage facilities, secondary containment equipment, storm drainage system, dry dock drainage systems and response equipment. Maintenance activity will be documented and follow up corrective actions will be documented. Weekly visual inspections of storage area of oils and chemicals will be kept on file at the Facility. Copies of these documents forms are included in Appendix B.

**4.2.1 ABOVEGROUND FUEL STORAGE FACILITIES (WHEN APPLICABLE)**

There are no aboveground fuel oil storage tanks in the shipyard. There is a mobile fuel oil truck.

All fuel oil transfers shall be supervised by the fuel truck operator who will monitor and record fuel transfers. A Checklist shall be used on-site to ensure the appropriate health and safety requirements are instituted before transfer operations begin.

**4.2.2 SECONDARY CONTAINMENT EQUIPMENT**

The secondary containment equipment has been selected to ensure sufficient capacity for the contents stored. A list of secondary containment systems/equipment used at the Facility is presented in Table 6. Secondary containment equipment is enclosed in drums and in storage areas to prevent waste materials making contact with storm water runoff.

**4.2.3 STORM DRAINAGE SYSTEMS**

The storm water drainage system, described in Section 3.0, shall be inspected on a monthly basis. Inspection records document the structural condition of storm drains, evidence of past or recent spills, clean-up activities conducted to remove silt and material residues. Records shall be maintained on-file for inspection purposes for a period of one year after the SPDES permit expires.

A record is maintained of every secondary containment storm water drainage event, which documents the presence of fuel, fuel removal activities, date of disposal, and inspector's initials.

**4.2.4 DRY DOCK DRAINAGE SYSTEMS**

The dry dock drainage system, described in Section 3.0, shall be inspected on a weekly basis during dry dock activities. Inspection records document the cleanliness of the drainage channels, sump pump and graving dock deck of the dry dock drainage system. Corrective actions shall be documented to ensure the cleanliness and functionality of the system. The shipyard General Manager will insure that the weekly inspections are accomplished and recorded. Records shall be maintained on-file for inspection purposes for a period of one year after the SPDES permit expires.

Prior to flooding the graving docks, the graving docks are to be cleaned of all materials. The General Manager shall keep a record that the graving dock has been cleaned and inspected prior to the dock being flooded.

**4.2.5 RESPONSE EQUIPMENT INSPECTIONS**

All response equipment is inspected monthly. The Pollution Prevention Coordinator is responsible for maintaining and testing pollution equipment located at the Facility. The Spill Response Contractor-of-Record (Miller Environmental Group) is responsible for maintaining and testing equipment located at their respective facilities. An inventory of exhaustible response equipment such as absorbent materials and drums is conducted to ensure that an adequate quantity of this equipment is available. Storage location and accessibility for each item are noted in the inspection form as well as the condition, last use date, and replacement date.



### **4.3 ACTIVITY-SPECIFIC BMPs**

This Section describes BMPs for industrial activities specific to Ship Repair Facilities that may pollute storm water. Combinations of source control, treatment and recycling BMP's have been selected for these activities at the Facility. These BMP's address the following operations and activities at the facility:

- Sandblasting Operations;
- Surface Coating Operations;
- Shipboard Processes;
- Exposed Materials & Wastes

Chemical and petroleum, oil and lubricant transfers are discussed in Section 3.3, Hazardous Material Inventory and Structural Controls.

#### **4.3.1 SANDBLASTING OPERATIONS**

Sandblasting required for surface preparations of marine vessels is provided on a contractual basis at the Facility. Sandblasting activities can contribute to particulate (metals) pollution of storm water runoff. However, the generation of spent abrasive materials have not been classified as toxic as hazardous wastes. Sandblasting activities, where feasible, are conducted under tarps and on plastic sheeting to prevent residue from being carried into the air and surface water. Abrasive blasting shall not be conducted in windy weather. Enclosures for abrasive blasting areas are used as a standard to prevent the release of blast dust as well as control of paint overspray.

Sandblasting activities at Dry Dock No. 1 shall be conducted using a minimum of 90% flow through tarps to contain the potential airborne dispersion of waste materials, due to its proximity to neighboring industries. Sandblasting and surface coating operations will be conducted after regular work hours, to alleviate potential nuisance issues.

Spent abrasive materials are collected and removed from graving docks, prior to flooding. Cleanup is conducted by front-end loaders, broom sweeping and vacuums to remove waste materials. The material is contained in berms along the topside, prior to characterization and disposal.

#### **4.3.2 SURFACE COATING OPERATIONS**

Surface coating operations (painting) use materials that create wastes that are harmful to the humans and the environment. Specialty marine paints include alkyds, epoxies, inorganic zinc, and limited paint thinners. These materials contain hazardous and toxic constituents, which need to be appropriately managed. The Facility utilizes low volatile organic compound (VOC) formulated paints. A material purchase is dependent upon the contractual service requirements and are supplied on an as-needed basis by the manufacturer. This purchasing requirement reduces the amount of paints being stored at the Facility and therefore the potential for pollution.

Surface coating activities include roller, brush and air-atomized spray guns application. All processes used are implemented to reduce the amount of environmental release. When spraying the spray process applied is used to minimize any overspray from surface coating

operations. Employees are trained to reduce overspray and minimize the amount of paint solids that can pollute storm water. Correct spraying techniques employed reduce the amount of paint needed per contract. Spraying shall not be conducted under windy conditions. When spraying outdoors tarpaulins and plastic sheeting shall be used, where feasible, to minimize release of overspray.

Surface coating activities at Dry Dock No. 1 shall be conducted using plastic tarps with a minimum of 90% flow through. This to contain the potential airborne dispersion of paint material(s), due to its proximity to neighboring industries. Spray surface coating operations will be conducted after regular work hours when possible, to alleviate potential nuisance issues.

Paints are stored and mixed in containment systems designed to prevent contact with storm water runoff. Portable spill pallets and containment areas shall be used to store and mix paints. Waste paints, thinners, and solvents are reused and recycled or disposed. Waste materials are segregated based upon hazardous and non-hazardous constituents identified in the MSDS or based upon TCLP sampling data.

#### **4.3.3 SHIPBOARD PROCESSES**

Shipboard processes include the generation of cooling waters, sanitary wastewaters, bilge, and ballast waters. Storm water can become contaminated by a wide range of contaminants (e.g. metals, sewage, oil, and grease) resulting from spills and leaks.

Process and cooling water use aboard ships shall cease during dry dock operations. Shipboard wastes are kept separate from sanitary wastes, to minimize disposal costs of sanitary wastes. Connecting hoses which pump to holding tanks located on berths shall be visually inspected for leaks, prior to use. If a leak is discovered, the system shall be secured until such time the leak may be repaired. The Facility shall implement spill control practices (BMP-4) to ensure the cleanup of any spills. Disposal of shipboard wastewaters shall be conducted under contract to a licensed disposal firm, and not discharged into the Brooklyn Navy Yard sewer system.

Ships under repair will not be permitted to discharge sanitary wastes into the adjacent surface water of the Navy Yard Basin. Sanitary wastes from the ship being repaired will be discharged directly for the ships to holding tanks of a licensed commercial waste disposal company. The appropriate material transfer procedures, including spill prevention and containment activities shall be observed.

Bilge and ballast waters cannot be legally discharged to State Waters if then contain oils, solvents, detergents, or other additives. All bilge and ballast waters (grey water(s)) will be appropriately transferred, collected, and disposed by a licensed commercial waste disposal company(s). The licensed commercial disposal contractor is required to provide the appropriate transfer, containment and mobile storage equipment and facilities for the removal of the bulk bilge and ballast waters.

The Facility will retain in their files a copy of their contract with the licensed waste disposal company(s), Bills-of-Laden, manifest(s) or other pertinent documents. These receipts shall be maintained and shall be available for inspection, upon notification from the regulatory agencies.

#### **4.3.4 EXPOSED MATERIALS & WASTES**

Raw materials, finished products, and waste storage areas exposed to rain and/or runoff can pollute storm water. Storm water can become contaminated by a wide range of contaminants (e.g. metals, oil, and grease) when solid materials wash off or dissolve into water, or by spills and leaks. The Facility shall avoid contaminating storm water from outside material storage by using the following measures;

- Storing materials indoors;
- Covering the area with a roof;
- Covering the material with a temporary covering such as tarpaulins made from polyethylene, polyurethane, and polypropylene, to prevent rain water accumulations;
- Minimize storm water runoff by enclosing areas or building a berm around the area.

Storage of waste materials typically includes spent sandblast, sediment, scrap metals, and refuse. The Facility provides proper solid waste disposal facilities to service workers and vessel owners docked at the Facility. Covered dumpsters and other covered receptacles are provided at each berth and in work areas.

#### **4.4 WASTE DISPOSAL PLAN**

The generation of hazardous waste and regulated materials are the responsibility of the ship-owner (the GENERATOR) and is managed for disposal by the Facility. This plan establishes policies, procedures and protocols for hazardous material management, identifies qualified Facility individuals and contractors, accumulation and storage, pre-transportation, disposal requirements, and record keeping and notifications.

The Facility is classified as a Small Quantity Generator (SQG) and has at times been a Large Quantity Generator (LQG) as codified in the Federal Regulations (40CFR 260.10) and NYS Codes, Rules and Regulations (6NYCRR Part 371). To retain status as a SQG, the Facility ensures the generation and accumulation of hazardous wastes and acutely hazardous wastes are carefully monitored, so that:

- The Facility generates between greater than 220 lbs. but no more than 2200 lbs. of hazardous waste monthly
- The Facility generates less than 2.2 lbs. of acutely hazardous waste per month
- The Facility stores less than 13,200 lbs. of hazardous waste and less than 2.2 lbs. of acutely hazardous waste
- The Facility stores the hazardous waste no longer than 90 days.

The facility complies with the rules for SQG mixtures. In addition, the Facility follows the requirements for transportation, treatment, storage and disposal of hazardous wastes as described below;

##### **4.4.1 IDENTIFICATION & LISTING OF WASTES**

Hazardous and regulated waste generated as part of ship repair services and operations include paint and thinners (hazardous waste), (rarely) asbestos containing materials (ACM), and waste oils. Hazardous wastes generated typically include ignitable, corrosive

and toxic chemicals from shipboard wastes, reactive chemicals are not typically encountered. All solid wastes generated shall be identified to determine whether the materials are regulated or hazardous wastes. The Facility identifies hazardous waste through research of MSDS sheets and when necessary having samples analyzed for proper determination. The Hazardous Waste Identification is designed to meet the regulatory requirements of 40 CFR Part 260 and 6NYCRR Part 361, and is the first step in the proper management prior to disposal.

#### **4.4.2 ACCUMULATION & STORAGE**

Wastes will be segregated, contained and stored in compatible containers or tanks. The designated areas for hazardous and non-hazardous drum and tote storage is located along the north east side of the property behind the machine shop. No hazardous waste is stored on site for up to 90 days without a permit or an extension by the NY State Department of Environmental Conservation (NYSDEC). Solids generated will be drummed or stored in a lined roll-off container provided by the contractor. All liquids will be drummed, or stored in various sizes of vacuum tank truck(s) or large 20,000 gallon Frac-Tanks, if necessary. All containers shall meet the requirements of 40 CFR 265, Subparts I and J, and shall be stored in spill containment areas that meet the specifications of 40 CFR Part 264. All tanks will be kept closed and be clearly marked and labeled as "hazardous waste". The label shall include the generator name, address, EPA identification number, and date accumulation began. The storage areas will be inspected daily, a weekly inspection record will be made.

#### **4.4.3 PRE-TRANSPORTATION**

Prior to transportation hazardous waste off-site, the waste will be packaged for transportation in accordance with the Department of Transportation (DOT) regulations on packaging (49CFR173, 178, and 179). Each container will be labeled and marked, and the vehicle will be appropriately placarded in accordance with DOT regulations (49 CFR 172). The hazardous waste shipment will be transported and manifested. Copies of the manifest will be provided to the generator, transporter and the receiving permitted Facility. The receiving Facility and transporter will require four copies, so that one may be returned to the generator, one sent to the receiving state environmental agency, one retained by the transporter and receiving Facility, and the last sent to the generator state.

#### **4.4.4 TRANSPORTATION AND DISPOSAL**

All hazardous waste will be shipped by the Hazardous Waste Transporter to a licensed hazardous waste recycling or treatment/disposal facility. Non-hazardous waste will be transported by a waste hauler to a licensed or approved solid waste transfer and disposal Facility. All waste materials identified as hazardous waste will be removed from the Facility within 90 days unless otherwise authorized by the NYSDEC. All hazardous waste disposal facilities shall at minimum have a RCRA permit for disposal of hazardous wastes.

GMD Shipyard implements a hazardous waste minimization plan, which promotes waste prevention, recycling, and waste to energy prior to disposal. Paint or solvent chemicals are treated as Hazardous Waste and are transported to facilities for recycling and blending. Waste oils and petroleum fuels with an economic value are recycled in waste to energy (permitted boilers) facilities or reclamation facilities in accordance with the requirements

of 40CFR 360-14. Recycling prevents the materials from entering the waste stream, and therefore is not regulated as hazardous wastes, but universal waste.

#### **4.4.5 RECORD KEEPING AND NOTIFICATION PROCEDURE**

All hazardous and universal waste shall be manifested in accordance with 40CFR Part 260 and 6 NYCRR Part 361, manifesting requirements. All disposals will be documented via manifests. Copies of Manifests, bills of lading, storage area inspections, reports, certificates, and characterization information will be kept on file at the facility for a period of five years.

#### **4.5 SEDIMENT AND EROSION CONTROL**

The Facility is located within the Brooklyn Navy Yard, which is entirely paved. The Facility topography is flat within a mean elevation of three (3) feet above mean low water. With the exception of spent abrasives stored in berms located on Berths and sediment washing into the dry dock structures from flooding activities, there is minimal potential for erosion or sediment transfer into the adjacent water body. BMP's require containment and management of the aforementioned materials to prevent transportation in storm water runoff.

#### **4.6 MANAGEMENT OF RUNOFF**

Storm water management at the Facility consists primarily of control BMPs and containment structures in potential source generating areas of the Facility. These structures are managed in accordance with the BMPs described in this Plan to minimize the potential for releases of toxic or hazardous materials. Dry dock drainage systems require graving dock cleanliness and cleaning of the dock area allowing water to flow to the pump.

#### **4.7 MATERIALS COMPATIBILITY**

Incompatible materials can cause equipment failure resulting from corrosion, fire or explosion. Ensuring the materials of construction of a container are compatible with its intended use can prevent such equipment failure. Materials compatibility encompasses three aspects; compatibility of chemicals with the container, compatibility of chemicals mixing within a container, and compatibility of the container with its environment. The shipyard minimizes reuse of containers.

When necessary, a determination is made of the materials of construction of the existing storage systems to be compatible with new material to be stored in the old container. To ensure materials compatibility in the Facility, the BMP Committee is responsible for the following:

- Evaluation of process changes relative to materials compatibility
- Evaluation of procedures of mixing of chemicals for compatibility
- Adequate cleaning of containers before use with a different chemical; and
- Use of proper coatings on storage vessels, if necessary to ensure safety.



## 5.0 SPILL PREVENTION AND RESPONSE PROCEDURES

Spills and leaks together are one of the largest industrial sources of storm water pollutants, and in most cases are avoidable. This section establishes the steps the Facility will take to identify and characterize potential spills, to eliminate or reduce spill potential, and how to respond when a spill occurs. In addition, this section establishes personnel responsibilities and the lines of communications through which emergency response procedures will be implemented for responding to fuel oil spills or releases. The Spill Contingency Plan for the Facility is presented in Appendix C.

In the event of release of oil or hazardous chemicals to the environment, the following list will be used to determine reportable quantities.

CAS #	SUBSTANCE	REPORTABLE QUANTITY
68476-34-6	#2 Fuel Oil (Diesel)	> 0 gallons in river
68476-34-6	#2 Fuel Oil (Diesel)	> 5 gallons to environment
64742-54-7	Lube Oil	> 0 gallons in river > 5 gallons to environment
N/A	Alkyd Paint	> 0 gallons in river > 5 gallons to environment
25068-38-6	Epoxy Paint	> 0 gallons in river > 5 gallons to environment
01330-20-7	Thinners	> 0 gallons in river > 5 gallons to environment

In the event of a spill or unplanned discharge of oil or a hazardous chemical for the following reporting sequence

### 5.1 PREDICTION OF DIRECTION AND RATE OF FLOW

The largest potential release that could occur at the Facility is from storage of fuel. The Fuel truck holds a maximum of 3000 gallons. There is no secondary containment for the truck. If there is a breach in the tank, the fuel oil will be diverted on-land by curbs, which surround the dry docks. Drain blockers are stored in areas where material transfers occur to prevent releases entering the catch basins. If the spill were to enter the dry dock then the spill would be contained within the graving dock. The shipyard will deploy containment booms and shut the graving dock stripping pump off until all the spilled materials are cleaned up.

The second largest release would most likely occur during fuel transfer operations via tank overfill or piping rupture, then during engine repair and other maintenance activity. If an overfill occurred, the release would be directed into the secondary containment of the equipment (when provided). If a piping rupture occurred during transfer from a ship to a fuel oil storage tank, a maximum of approx. 500 gallon could be released (based on the length and size of transfer hose (volume). Spill on the water will be contained by floating oil booms deployed prior to transfer. Then whatever is spilled will be cleaned up using absorbents. When this occurs while the ship is afloat inside the graving dock, the drainage pump system will be de-energized to prevent spills from entering the surface waters. If this happens when a ship is outside of a graving dock the outside response company on call will be notified to respond immediately.

### 5.2 CORRECTIVE ACTION FOR LEAKS AND SPILLS

Response procedures and equipment vary depending upon the severity of the spill or release. The average most probable, maximum most probable, and worst case discharge scenarios are outlined in the BMP. The procedures described below apply to all discharge scenarios.

In the event of a spill or release, Spill Response and Pollution Prevention Coordinators will be the first to respond. In all cases the Spill Management Team, which will consist of, the personnel working at the Facility will:

- Notify the Shift Supervisor to call the Qualified Individual (QI);
- Stop the source of the spill or release by stopping the pumps and closing the valves;
- Warn others on the scene; and
- Make every effort to contain the spill and begin the cleanup process with on-site response equipment and materials.

Depending on the situation, the QI will determine if the remedial contractor-of-record, Miller Environmental Group (MEG), will be called. A copy of MEG's marine response qualifications is presented in Appendix F.

**Spills or releases less than 200 gallons and contained on-land,** the Spill Management Team will contain and remediate the area with on-site equipment and materials. Upon completion, MEG will provide services.

**Spills or releases greater than 200 gallons or releases that are not contained (i.e., the spill has entered the surface water or sewer),** the QI will immediately notify MEG to contain and remediate the area. Upon notification, MEG will respond to the Facility within two hours by dispatching a manager, supervisor, foreman, marine personnel, equipment operators, and trained laborers in sufficient numbers to contain the reported spill at the direction of the QI. The Spill Management Team will contain and clean up the spill or release with on-site equipment and materials until relieved by MEG.

If the spill has penetrated or bypassed the boom at the opening of the dry dock, skimmers and additional booms will be deployed in order to contain the spill. When the spilled material has been contained, cleanup will begin. Sufficient cleanup materials such as absorbent pads, socks, and booms will be mobilized for delivery to the site by both boat and vehicle. Cleanup efforts will include the use of skimmers, boats with absorbent materials, and shoe (dock area) deployment of absorbent materials. MEG will also deploy drums, tanks, and/or a barge, as required, to temporarily store the recovered spill material until disposal. In addition, MEG will clean all contaminated structures.

**For fires and/or explosions,** the Shift Supervisor should immediately call the New York City Fire Department (NYCFD) (Call 911). In addition, the Shift Supervisor should call the Brooklyn Navy Yard Development Corporation (BNYDC) Protective Services (718-907-5900) to evacuate the immediate vicinity within 0.5 mile in all directions. Project Operator personnel are required to meet the NYCFD when they arrive on the scene.

### 5.3 SPILL RESPONSE EQUIPMENT

The following equipment is available on-site for responding to spills. The equipment is located in Plastic drums labeled OIL SPILL EQUIPMENT at the caisson ends of Dry Dock #1, #5 and #6.

- 2 mobile aboveground storage tanks
- Containment and absorbent booms for dry docks and wet berths.

- Mobile containment systems (spill pallets and mobil tank)
- Intrinsically safe tools
- Absorbent pads (1000 gallon capacity)
- Two open head plastic 85 gallon drums
- Dry Chemical and CO<sub>2</sub> fire extinguishers
- Life line and ring
- Life jackets
- Portable sump pump

In addition, two mobile spill response kits for cleaning small petroleum products, coolant, and solvent spills are located on along the adjoining berths. Each kit includes floatable berm, absorbent socks, pillows, pads, and disposal bags.

## **5.4 NOTIFICATION PROCEDURES**

The Facility has designated a Spill Response Coordinator who is responsible for responding to all emergency response activities occurring at the Facility. All discharges in, around, or near the Facility are immediately reported to Mr. Alex Gomez, Spill Response Coordinator; who is the Owner's designated qualified individual (QI). The Owner's designated alternate qualified individual (AQI) is Mr. Kevin Nugent, Pollution Prevention Coordinator. The above-mentioned individuals reside in the New York/New Jersey Region, and are available on a 24-hour basis. These individuals are responsible for initial notification and follow-up notifications to the federal, state and local agencies and to the Facility's contracted spill response contractor, Miller Environmental Group, Inc. (MEG).

### **5.4.1 EMERGENCY NOTIFICATION PHONE LIST**

The following notifications list presents the order of priorities that will be made in the event of a discharge at the Facility.

1. Pollution Prevention Coordinator, GMD Shipyard: Kevin Nugent, Alternate Qualified Individual, Emergency Telephone: (347) 675-8876
2. Spill Response Coordinator, GMD Shipyard: Alex Gomez, Qualified Individual, Emergency telephone: (201) 481-9902
3. Report any Spill immediately, day or night, to the emergency response contractor: MEG, at (516) 369-4900.
4. Report any Spill immediately to the Brooklyn Navy Yard Development Corporation (BNYDC), at (718) 907-5900.
5. Report any Spill immediately, day or night, to the local police department headquarters at (718) 636-6511 (88<sup>th</sup> Precinct).
6. Report any spill immediately, day or night, to New York Fire Department at (718) 636-1700, the Bureau of Fire Communication at (718) 999-4444, and the Bureau of Fire Prevention at (718) 694-2554

In addition, the following appropriate governmental agencies should be notified:

1. United States Coast Guard (USCG) National Response Center  
1-800-424-8802 or (202) 267-2675  
USCG New York, NY (212) 668-7920
2. New York City Department of Environmental Protection  
(718) 337-4357

3. New York State Department of Environmental Conservation Hot Line  
1-800-457-7362 (within two hours of discovery)
4. U.S. Environmental Protection Agency (EPA), Region II  
(908) 547-8730

A copy of the Emergency Notification Phone List is included in Appendix D.

#### **5.4.2 RESPONSE NOTIFICATION FORM**

In the event of a discharge or an imminent threat of a discharge, a Response Notification Form will be completed. A copy of this form is included in Appendix D. The form details basic Facility information, the involved parties, an incident description, the material discharged, the response action taken, the impacts of the discharge to both human health and the local environment, and organizations notified. The incident description includes the source, cause, date, time, and location of the discharge. The quantity of discharged material, including a breakdown of quantity of discharged material that was released into water. The information from this form will be sent to the applicable federal, state, and local agencies within 30 days following the incident as required.

## **6.0 EMPLOYEE TRAINING**

Employee training is essential to effective implementation of the Best Management Practice plan at the Facility. The purpose of the training is to teach personnel at all levels of responsibility the components and goals of the BMP plan. Trained Facility personnel are more capable of preventing spills, responding safely and effectively to an accident when one occurs, and recognizing situations that could lead to storm water contamination.

Training topics include:

- Environmental Laws and Regulations;
- Pollution Prevention Goals and concepts;
- Spill Prevention and Response;
- Good Housekeeping Practices; and
- Material Management Practices.

All new employees receive four hour facility specific training. All Spill Response personnel receive four hours of specific response training. Four hour refresher training sessions are held annually for all spill response personnel.

## **6.1 TRAINING PROCEDURES**

Proper training of employees in equipment operations and maintenance can reduce both the number and the severity of discharges. Good Housekeeping training of employees is stressed so that in the event of any accidental discharge no additional materials will be involved or intermixed with the discharge involved. Training also helps employees develop response skills, such as communication with the remedial contractors, familiarity with the BMP Plan, and spill prevention skills. Facility personnel training forms (appendix G) are maintained for a minimum of three years. Training records are maintained for each employee for as long as he/she is assigned responder duties, and for each instructor or training organization providing the training.

The following sections provide effective storm water pollution prevention training program for the Facility.

### **6.1.1 SPILL PREVENTION AND RESPONSE**

Spill prevention and response procedures are described in detail in Section 5.0. These procedures and plans are presented in the training program in order to ensure all plant employees, not just those on the spill response teams, are aware of what to do if a spill occurs. Specially, all employees involved in the individual activities of the facility are being trained about the following measures:

- Identifying potential spill areas and drainage routes, including information on past spills and causes;
- Reporting Spills to appreciate individuals, without penalty (e.g. employees should be provided "amnesty" when they report such instances);
- Specifying material handling procedures and storage requirements;
- Implementing spill response procedures.

### **6.1.2 GOOD HOUSEKEEPING**

Facility personnel shall be trained in how to maintain a clean and orderly work environment. Section 6.1 above outlines the steps for practicing good housekeeping. Emphasis of these points in the good housekeeping practices is part of the Facility's training program, which includes:

- Require regular cleaning by vacuuming and/ or sweeping;
- Promptly clean up spilled materials to prevent polluted runoff;
- Identify places where brooms, vacuums, sorbents, neutralizing agents, and other spill response equipment are located;
- Display signs reminding employees of the importance and procedures of good housekeeping;
- Discuss updated procedures and report on the progress of practicing good housekeeping at every meeting;
- Provide instruction on securing drums and containers and frequently check for leaks and spills; and
- Outline a regular schedule for housekeeping activities to allow you to determine that the job is being done

### **6.1.3 MATERIAL MANAGEMENT**

Personnel are trained in how to manage materials, which are currently used, stored, and disposed at the Facility. Steps for proper material management include the following:

- Neatly organize materials for storage;
- Identify all toxic and hazardous substances stored, handling, and produced on-site;
- Discuss handling procedures for these materials; and
- Discuss reuse, recycling and disposal requirements for waste, both hazardous and non-hazardous, at the Facility.

Emphasis of these practices in material management is part of the Facility's training program.

## **6.2 BMP PLAN REVIEW AND UPDATE PROCEDURES**

This BMP plan will be reviewed annually by the Facility owner/operator. Any changes to the plan will be noted on a record-of-changes and attached as an Appendix to the end of the plan. Activities which may lead to a plan amendment include changes in the National Oil and Hazardous Substances Pollution Contingency Plan or Area Contingency Plan; federal, state, or local regulation; Facility layout; new piping construction or purchase; different worst-case volume, local regulation; materials handling; emergency response procedures changes; and/or any other aspects which may significantly alter the BMP plan. Revisions and amendments will be made and forward to all involved agencies (i.e. EPA REGION II, USCG, and NYSDEC) within 30 days. A periodic update of the BMP plan will be performed every year.



GRAVING DOCK #1  
LAY BERTH #3  
GRAVING DOCK #5

GRAVING DOCK #6

**TABLE 1 – SUMMARY OF BEST MANAGEMENT PRACTICES**



**Table 1 SUMMARY OF BMP's**  
**Targeting Specific Activities and Pollutants**

Targeted Activity	Pollutant		BMP Name	BMP #
Surface Preparation	Spent Abrasives, Paint Particles, Solvents		General Yard Cleanup	1
Paint Removal			Storm Drain Maintenance	2
			Graving Dock Cleanup	3
			Graving Dock Spent Abrasive, Dust (paint and/or abrasive), and Overspray Control	5
			Non-Graving Dock Spent Abrasive, Dust, and Overspray Control	6
		Waste Material Storage and Disposal	11	
Pressure Washing, High Pressure and Low Pressure	Paint Particles		Pressure Wash Debris Collection	7
Painting	Paint Spills, Paint Overspray, Solvent and Thinners		Spill Control Practices	4
			Graving Dock Spent Abrasive, Dust and Overspray Control	5
			Non-Graving Dock Spent Abrasive, Dust, and Overspray Control	6
			Material Transfer Management	9
			Designated Material Mixing Areas	10
		Waste Material Storage and Disposal	11	
Engine Maintenance	Spent Solvents, Cleaners, Used Oil, Antifreeze, Other Engine fluids, Used Engine Batteries		General Yard Cleanup	1
			Spill Control Practices	4
			Containerized Material Storage and Management	8
			Bulk Liquid Storage and Contain	9
			Waste Material Storage and Disposal	11
Material Handling Transfer, Storage and Disposal	Paints, Solvents, Spent Abrasives, Solvents, Paint Particles, and Petroleum Products		Containerized Material Storage and Management	8
			Material Transfer Management,	9
			Designated Material Mixing Areas,	10
			Waste Mater'l Storage and Disposal	11
Shipboard Process	Process & Cooling Wtr Sanitary Waste Bilge and Ballast Water		Shipboard Process Water Handling	12
			Shipboard Sanitary Waste Disposal	13
			Bilge and Ballast Water	14
All	All		Personnel Training	15

**BMP NUMBER:** 1

**BMP NAME:** HOUSEKEEPING: GENERAL YARD CLEANUP

**TARGETED ACTIVITY:** ALL

**TARGETED POLLUTANT(s):** SPENT ABRASIVES, PAINT CHIPS, SOLVENTS, CLEANERS, SCRAP METAL, PETROLEUM PRODUCTS, AND OTHER SOLID WASTE DEBRIS

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**DESCRIPTION:**

The Facility shall be inspected and cleaned daily as part of the general pollution prevention practices, and at designated periods to minimize pollutant contact runoff with storm water into New York Harbor. Equipment materials, waste materials, and other debris shall be properly stored where possible under roof, protective covering, or containment to prevent storm water contact. After work has been conducted on marine vessels and prior to flooding of the graving dock, the graving dock will be thoroughly cleaned of all materials and wastes to provide a safe and clean working environment

To ensure that trash is properly collected, trash receptacles will be located on piers and on vessels under repair. Each day all trash receptacles will be emptied.

Spent abrasives and paint chip residuals shall be routinely collected and containerized to prevent contact with storm water. Spent abrasives shall be contained in the used sandblast containment area, unless they can be disposed of in dumpsters immediately after being pulled up from the graving dock. The used sandblast containment area has a hard cover, is contained by fixed steel wall on the sides and back and has a removable curtain in the front\*. The bottom is lined with asphalt. Waste classification for disposal shall be accomplished by review of the Material Safety Data Sheet and/or Safety Data Sheet of surface coat removed and/or sampling and Toxicity Characteristic Leaching Procedure (TCLP) analysis of spent materials, where no MSDS are available.

Scrap metals shall be stored in designated scrap metal bins, see facility diagram, until it can be removed from the facility. Trash and other solid wastes shall be disposed of in clearly marked receptacles that are routinely serviced. All recyclable materials shall be separated from the trash and collection of these materials shall be contracted to recycling contractors.

Cleanup of areas contributing to storm water runoff shall consist of mechanical or manual methods to collect debris. These methods include vacuums, mechanical sweepers, broom sweepers, front-end loaders, and shovels. The use of spray water will not be employed.

Personnel training shall be provided to ensure the effectiveness of these general housekeeping practices. For employees unfamiliar with the facility disposal practices, please reference the facilities Waste Material Storage and Disposal, BMP#11.

**BMP NUMBER: 2**

**BMP NAME: HOUSEKEEPING: STORM DRAINAGE MAINTENANCE**

**TARGETED ACTIVITY: GENERAL MAINTENANCE, SURFACE COATING OPERATIONS, MATERIAL DISPENSING & WASTE TRANSFERS FROM MARINE VESSELS**

**TARGETED POLLUTANT(s): ALL**

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**DESCRIPTION:**

After pumping the graving dock(s) and prior to work commencing on marine vessels, the graving dock will be cleaned of all silt and debris from the docking. Filter materials will be placed over or in all drains, the main sump pump drains will be covered with impervious materials and surrounded with hay. Throughout the dry dock period the graving dock will be routinely inspected and cleaned, as necessary. The filter materials and hay will be renewed as inspections dictate to maintain the cleanliness of the water being discharged. Inspection logs and cleaning record shall be maintained, as part of the recordkeeping practices.

To minimize potential pollutants and storm water runoff entering the drainage channel system, all channels and basins running the length of the graving dock(s) shall be inspected on a daily basis when marine vessels are in dry dock. These channels will have intermittent bales of hay placed to filter the water running into the Graving Dock outflow. All material accumulation shall be removed and containerized for disposal purposes.

During surface coating operation, material dispensing operations and waste transfer activities all bulk chemicals and Petroleum oil lubricants (POLs) shall be stored in closed containers, locate on secondary containment pallets, both prior to and during use. Prevention of storm water contact shall be accomplished by containment in chemically compatible drums or storage tanks. Incompatible materials shall be segregated, and spills or leaks shall be immediately cleaned. Unused chemicals shall be properly stored in covered storage areas for reuse or returned to the manufacturer for reuse/refund. Disposal of spilled chemicals or POLs shall be provided by a permitted disposal facility and transported by a licensed transporter. Records of all disposals, manifests and or trip tickets, shall be kept with the HSE Department.

**BMP NUMBER: 3**

**BMP NAME: HOUSEKEEPING: GRAVING DOCK CLEANUP**

**TARGETED ACTIVITY: ALL DRY DOCK ACTIVITIES**

**TARGETED POLLUTANT(s): SPENT ABRASIVE, PAINT CHIPS, PAINTS & THINNERS, CLEANERS, SCRAP METAL, TRASH, AND OTHER DEBRIS**

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**DESCRIPTION:**

As described in the General Yard Cleanup BMP #1, the dry dock shall be maintained and cleaned routinely as part of the general pollution prevention plan to prevent contact with storm water and surface waters during flooding of dry docks. Equipment, materials, paints, solvents, and other debris shall be properly used, stored, and protected to minimize their contact with storm water.

Preventative maintenance of equipment shall be conducted prior to use within the graving dock(s) and outside of the Graving Dock. This to reduce spills and leaks that will require additional disposal of materials. Equipment maintenance logs shall be kept on-file to document that equipment maintenance activities took place. When a piece of equipment fails, it will be removed from the Graving Dock so that maintenance can be done. Only when it is necessary to move the machine to allow activity to lift it, will maintenance of equipment be accomplished inside the Graving Dock.

Prior to flooding of the dry dock, all areas of the dock shall be thoroughly swept clean of debris and spent abrasive material. Spent abrasive shall be stored in the designated used grit storage area under cover, or in designated roll-off containers at the site for this purpose. Debris that can be removed by vacuuming shall be accomplished where practical.

Floatable and other low-density waste (wood, plastic, insulation, etc.) shall be removed and properly separated from the used grit, at the end of each workday. Each workday, the areas that have been sand or water blasted shall be swept clean, no water shall be used for cleanup, and the swept up is to be removed for disposal. In addition, the graving dock shall be cleaned on a regular basis, whether a ship is present or not, to prevent materials from collecting, falling into the dock drains and/or potentially washing into the receiving waters.

Methods of debris removal include manual means and machinery such as thorough broom sweeping, the use of front-end loaders, bobcat operations and vacuum trucks, where practical. Wastes will be properly containerized for classification, disposal and/or beneficial use.

**BMP NUMBER: 4**

**BMP NAME: SPILL CONTROL PRACTICES**

**TARGETED ACTIVITY: ALL ACTIVITIES**

**TARGETED POLLUTANT(s): PETROLEUM OIL LUBRICANTS, PAINTS & THINNERS, CHEMICALS & SANITARY WASTEWATERS**

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**DESCRIPTION:**

The SPILL CONTINGENCY PLAN shall be implemented in the event of a spill of petroleum, oil, lubricants, paint or thinners, chemicals, and sanitary wastes. The designated spill response personnel shall be notified in the event of a spill. Spill response personnel are familiar with notification, containment, and cleanup, and will notify U.S. Coast Guard, U.S. Environmental Protection Agency, NY Department of Environmental Protection and Authorities of the Brooklyn Navy Yard should a reportable spill reach storm drains and reach surface waters.

Protection devices such as filter systems, secondary containments, protective coverings, drip pans, hay bales and spill response kits shall be provided for all transfer activities such as paint/thinner mixing, petroleum oil transfers, and chemical usage to prevent contact with storm water and surface waters. Under no circumstances shall paint mixing/dispensing, oil transfers, sanitary transfers be allowed outside of a containment tray or in any areas where spills may impact surface waters directly. Paint/thinner spills shall be treated in the same manners as oil spills and shall elicit the same spill response procedures to prevent material from entering receiving waters.

The amount of paints, thinners, chemicals, and petroleum oil lubricants stored at the facility will be kept to a minimum. In the main shipyard area there are four shipping containers for the storage of paint. Chemicals and petroleum oil lubricants which comply with 29CFR1910.106 (a)(12) are stored in the mechanics area. All flammable liquid cans and drums shipped to the facility for particular repair jobs will be stored inside the Tool room area of the warehouse. Chemicals are purchased on an as-needed basis to satisfy marine service contract requirements. Paints and petroleum products stored at the facility will be kept to a minimum. Paints and petroleum shall be temporarily stored in designated outdoor drum containment cabinets, transported and dispensed on spill control pallets. These containment spill control system pallets have been selected to meet the specifications of EPA 40CFR264.175 by providing containment of 10% capacity or the volume of the largest container on the pallet, and are chemically compatible with materials stored.

Spill Response Centers are located throughout the Facility. These mobile spill response kits have been carefully selected for outdoor use throughout the facility. Absorbents have been selected to provide compatibility with chemical usage at the facility. Each spill response center provides for the following absorbent capacity:

- On Land Spills - 300 gallon absorbent capacity
- Surface Water Spills – 1,200 Gallon Absorbent Capacity
- Surface Water Containment Booms – 1100 linear Feet

**BMP NUMBER: 5**

**BMP NAME:                   GRAVING DOCK or DRY DOCK SPENT ABRASIVES, DUST, AND OVERSPRAY CONTROL**

**TARGETED ACTIVITY:       BLASTING AND PAINTING**

**TARGETED POLLUTANT(s): SPENT ABRASIVES, PAINT CHIPS, and PAINTS**

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**DESCRIPTION:**

To the maximum extent practical, all activities are to be enclosed or covered to prevent contact with storm water.

- a) Blasting with low dust certified abrasives shall be employed to reduce the percentage fracture of abrasives and therefore minimize release of fine particulates, which can disperse.
- b) Blasting with high pressure water shall be employed to reduce the use of abrasive grit when possible, and therefore eliminate the release of grit particulates. When this process is used, after the water dries at the bottom of the graving dock the waste paint needs to be swept or vacuumed up and removed from the graving dock before allowing the area to be wetted again. No water shall be used to push this waste paint dust around.
- c) Surface coating of vessels will employ certified low VOC paints that will reduce emission of volatile organic compounds during surface coating applications. The Graving Dock shall have containment covers stretched from side to side at the bow and stern ends of the ship and containment covers from the main deck to both the starboard and port sides of the graving dock, where feasible, to prevent over spray of abrasives and paints. Drainage channels and filter systems shall be cleaned out to remove deposits of abrasives and overspray of paint. Windy conditions can render blast and paint containment ineffective; therefore, blasting and painting shall not be performed during wind conditions (greater than 20 mph) likely to cause blast over spray and drift outside the dry dock containment system.

**GRAVING DOCK CONTAINMENT**

Feasible methods that shall be employed include dry dock curtains hung from the graving dock walls at both ends of the ship. Full ship containment is then attained by hanging tarps from the main deck of the vessel to the sides of the graving dock; then connecting them to the fore and aft dry dock curtains. This will allow for full containment of the vessel sides and bottom. Localized tarpaulins shall be employed from temporary structures (scaffolds) erected for that purpose for blasting and painting specific on deck ship parts. The bottom edge of the tarpaulins and plastic sheeting shall be weighted down during a light breeze. When sandblasting, plywood and/or plastic sheeting shall be used to cover open areas between decks. Slight modifications to how the sheeting will be attached may be necessary due to vessel configuration to prevent blast dust, paint or other debris from contaminating storm water.

**BMP NUMBER: 6**

**BMP NAME: NON-DRYDOCK SPENT ABRASIVES, DUST, AND OVERSPRAY CONTROL**

**TARGETED ACTIVITY: BLASTING AND PAINTING**

**TARGETED POLLUTANT(s): SPENT ABRASIVES, PAINT CHIPS, PAINTS**

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**DESCRIPTION:**

To the maximum extent practical, all activities are to be enclosed or covered to prevent contact with rain water and storm water. The facility has one area designated for blasting that is not in the graving dock. This outdoor but enclosed abrasive blasting and painting area shall be sufficiently contained to prevent abrasives, paint chips and over spray from reaching surface waterways. All non dry dock surface coating operations shall be conducted in designated areas that are enclosed to prevent dispersal of materials and to prevent storm water impact.

**NON-DRY DOCK CONTAINMENT**

Protective devices such as secondary containment systems, steel enclosed paint mixing and spray booth, protective coverings, drip pans, and spill response kits shall be deployed for all topside transfer activities such as paint/thinner mixing, petroleum oil lubricant transfers and dispensing, and chemical usage to prevent contact with storm water and surface waters. Under no circumstance shall paint mixing/dispensing, or oil transfers, be allowed in areas where spills may impact surface waters directly. Paint/thinner spills shall be treated in the same manner as oil spills and shall elicit the same spill response procedures to prevent material from entering surface waters.

**BMP NUMBER: 7**

**BMP NAME: PRESSURE WASH WATER FILTRATION**

**TARGETED ACTIVITY: PRESSURE WASHING**

**TARGETED POLLUTANT(s): MARINE GROWTH & PAINT PARTICLES**

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**DESCRIPTION:**

The shipyard typically conducts surface coating operations as follows:

- a) Low pressure water blasting to wash surface marine growth off the hull to accomplish a hull inspection
- b) Followed up with either one of the following for the purpose of painting.
  - a) Spot blasting of either Ultra High Pressure Water Blasting or
  - b) Spot blasting of abrasive blast materials

Sometimes vessel owners ask for a total paint removal of the hull which can be done using Ultra High Pressure water blast of the entire hull, or abrasive blasting of the entire hull.

When pressure washing, both low pressure and ultra-high pressure, the discharge water shall be filtered before being allowed to go into the drains. There are two typical filter materials used.

- a) **HAY BALES:** In graving docks #5 and #6 there are water drain troughs on each side. In these troughs immediately before the pump sumps there will be hay bales placed to work as filters. In graving dock #1 all the water can flow from the dock into the pump sump trough. Immediately before the trough there will be lined bales of hay which will filter the water before it reaches the sump pump trough.
- b) In addition to hay bales, there will be plastic and plywood placed on top of the sump pump gratings in Graving Dock #5 and #6. This to prevent and direct landing of waste grit, water blast and or paint. The sumps will be covered to protect against any accidental insertion of waste materials. Each pump sump will be covered with 80 mil plastic sheet and then covered with 0.5" plywood and then the periphery of each sump will be surrounded with bales of hay to prevent airborne and water borne particles from entering the sumps. In Graving Dock #1 the pumps are not placed in specific sumps. To prevent accidental insertion of wastes these pumps will be covered with tarps

Marine growths, paint debris and waste black beauty grit can contain significant quantities of organic materials and waste paint metals constituents and shall not be directly discharged to surface waters. Pressure washing shall be performed, where possible, in designated areas where wash water can be contained, the debris filtered from the water and the debris then can be separated from the water. That debris that does not flow with the water will be swept or vacuumed up and removed from the graving dock each day so that additional water related activity will not cause the debris to flow toward the graving dock drain system.



**BMP NUMBER:** 8

**BMP NAME:** CONTAINERIZED STORAGE AND SECONDARY CONTAINMENT MANAGEMENT

**TARGETED ACTIVITY:** MATERIAL HANDLING OF PETROLEUM OIL LUBRICANTS, CHEMICALS, PAINTS & THINNERS, & SPENT ABRASIVES

**TARGETED POLLUTANT(s):** PAINT, SOLVENTS, CLEANERS, SCRAP METAL, TRASH, PETROLEUM PRODUCTS, SPENT ABRASIVES, & PAINT CHIPS

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**DESCRIPTION:**

All stored and containerized materials (fuels, paint, solvents, etc.) shall be prevented from entering surface water through the use of proper storage facilities and procedures. These materials will be stored in compatible containers, as supplied by the manufacturer in covered areas until use. All paints, thinners, solvents, and petroleum oil lubricants shall be stored in secondary containment systems that provide overspill protection (EPA 40CFR264.175). Containers shall be stored in a protected, secure location, and away from any drains. Storage of reactive ignitable, or flammable liquids must comply with the local fire code.

The key to controlling and managing potential environmental and health hazards ultimately lies in developing and following a formal, comprehensive health and hazard control program. Components of the program include the following:

- a. Identification of potentially hazardous materials, their characteristics, and use.
- b. Inventory control prevents excessive purchasing, storage, and handling of potentially hazardous materials. Records of Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) shall be maintained to identify the materials, their: service life, handling procedures, cleanup and disposal protocols.
- c. Physical Storage of materials shall be carefully controlled in designated areas. Hazardous materials shall be secured and carefully monitored to prevent theft, vandalism, and misuse of materials.
- d. Education and Training of personnel shall include procedures and protocols for proper storage, use, cleanup, and disposal of materials.

Outside storage areas should be paved, curbed, and have sufficient containment for either 10 percent of the volume of all containers or 110 percent of the volume of the largest container. Temporary containment shall be provided by portable secondary containment pallets or aboveground storage tanks. Spill troughs and drip pans shall be deployed and are recommended for drums with taps. All Waste oil materials will be stored in a bermed and lined containment area in the designated drum area. The constructed containment area consists of:

- a) Non Hazardous Containment area for drums is an 100 ft x 40ft locked fenced in area. There is an area under cover that is approximately 30' x 30' with open sides. The perimeter of this fenced in area is bermed with a 6" high bump of concrete block around the fence and a concrete bump at the gate opening.

- b) Hazardous Containment area for drums and other is a shipping container with one side opened located within the Non Hazardous Waste area, the area is 8' x 20'. The back, side walls and overhead are steel. One side is opened with a berm of 6" steel. To hold 110% spillage, the maximum number of 55 gallon drums is **9 drums**.
- c) An additional, all non-hazardous materials in totes are kept within the locked in non-hazardous storage area.

Total storage capacity of the non hazardous section is"

Non hazardous materials 100ft x 40 ft. – (8' x 20') x 0.5 ft. = 1920 cubic ft.

Non hazardous material storage at 100% is 14,370 gallons.

Maximum gallons to maintain 110% containment is 13060 gallons

Maximum number of 55 gallon drums to maintain 110% containment in the non haz area = **237 dr.**

(this needs to be reduced based on any storage of used oil in totes)

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**BMP NUMBER:** 9  
**BMP NAME:** MATERIAL TRANSPORT MANAGEMENT  
**TARGETED ACTIVITY:** MATERIAL HANDLING  
**TARGETED POLLUTANT(s):** PAINTS, SOLVENTS, OILS, & FUELS

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**DESCRIPTION:**

Liquid material transfer activities shall be performed so that spills, drips and leaks are minimized and prevented from entering receiving waters. Employees will be trained in these procedures and shall be present during the entire transfer of material. The transfer should take place over a paved area, and drip pans, dikes, or other containment systems will be in place during all transfers. The following liquid and transfer equipment has been selected to control and contain materials:

- A. Transfer pumps will be used with Spill Containment Pallets for drum storage of Petroleum Oil Lubricant's and chemical products. Drum storage sump capacity = 150% gallons.
- B. Spill Containment Pallets will be used for the storage, transfer, and dispensing of Petroleum Oil Lubricants and paints. Sump capacity = 150% gallons.

There are a number of safe practices to follow when transferring or dispensing materials. When dispensing or transferring liquids into closed head drums, a large diameter locking funnel will be used. For efficient transfers, the large diameter the better, as long as the funnel is sturdy enough not to create its own spill hazard. Heavy viscous materials, oil in oil filters, or the residual paint in "empty cans" will be allowed to drain passively through large, low profile funnels.

Accidental damage to hoses and pipes will be minimized by proper inspection and replacement, where required. Hoses and pipes shall be inspected regularly for leaks or damage, prior to and during use by equipment operators and the maintenance department.

**BMP NUMBER:** 10  
**BMP NAME:** DESIGNATED MATERIAL MIXING AREAS  
**TARGETED ACTIVITY:** MATERIAL HANDLING PAINTS & THINNERS  
**TARGETED POLLUTANT(s):** PAINTS & SOLVENTS

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**DESCRIPTION:**

Paint and thinner mixing will be conducted in enclosed metal mixing sheds, specifically made for the purpose of providing coverage and leak proof spill prevention. Paints and solvents will be purchased on an as-needed basis, and stored in enclosed approved containment structures. The amount of paint stored on the berths and graving dock will be kept to a minimum. Mixing areas sheds will be shifted close to the area being worked and as far from any drains as possible to prevent any chance of a possible release of liquid paint to a drain. Mixing sheds will be located away from vessel drainage discharges and away from any rainfall or storm water discharges.

Protective devices and containment systems will be employed during storage, transfer, and mixing activities. Tarpaulins, spill pallets, drip pans, and drop clothes, will be used whenever paint and thinners area mixed. Spill containment devices selected for use at the facility offer protection not just for spills, but also for leaks that develop in the paint containers.

**Outdoor Storage Systems include:**

- A. Paint mixing metal sheds offer protection from rain, protection from liquid paint cans and liquid paint & solvent drums. For drum storage sump capacity = 150 % gallons.
- B. In the main shipyard, Paint Storage is accomplished using four (4) steel shipping containers [20' x 8' x 8.5'] located outside on the south side of Graving Dock #5. Each container can hold up to 1000 gallons. In the Graving Dock #1 area paint storage is accomplished by using a cement block building. This building can hold up to 300 gallons of paint.

Solvent and paint spills will be treated the same as oil spills, and require spill response procedures, to prevent spill from reaching storm drains and surface waters. Absorbents and other spill response items will be available in mixing areas.

BMP NUMBER: 11

BMP NAME: WASTE MATERIAL STORAGE AND DISPOSAL

TARGETED ACTIVITY: MATERIAL HANDLING, SURFACE PREPARATION, PAINTING, ENGINE & MAINTENANCE ACTIVITIES

TARGETED POLLUTANT(s): SPENT ABRASIVES, PAINT CHIPS, USED OIL, PAINTS, BRAKE FLUID, ANTIFREEZE, BATTERIES, USED FUELS & SOLVENTS

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**DESCRIPTION:**

1. **ABRASIVES:** Spent abrasives, which contain metals constituents from paint chips will not be exposed to storm water runoff. This material shall be stored in a covered area over a complete asphalt surface. At the end of each day the area will be inspected to ensure that the sides and top are secured and that the tarpaulin curtain covering the front is intact and closed. Spent abrasives waste will be classified through existing knowledge of removed paints or hazardous waste characterization testing. Typically this waste is not classified as hazardous, spent abrasives shall be disposed as industrial solid waste or beneficially be reused pursuant to a state BUD. A licensed commercial disposal company will be contracted for the disposal of spent sandblast materials.

2. **WASTE OIL:** Waste oil shall be classified as on-specification or off-specification pursuant to the used oil regulations. On specification oil shall be recycled. Waste oil shall not be mixed with solvents, antifreeze, degreasers, or engine fluids. These chemicals may contaminate the oil and make it unfit for recycling. Waste Oil shall be stored according to material storage procedures.

3. **WASTE PAINT:** To prevent contact with the ground, Paint and thinner mixing will be conducted in enclosed metal mixing sheds, specifically made for the purpose of providing coverage and leak proof spill prevention. Paints and solvents will be purchased on an as-needed basis, and stored in enclosed approved containment structures. The amount of paint stored on the berths and graving docks will be kept to a minimum. Mixing areas sheds will be shifted close to the area being worked and as far from any drains as possible to prevent any chance of a possible release of liquid paint to a drain. Mixing sheds will be located away from vessel drainage discharges and away from any rainfall or storm water discharges.

Protective devices and containment systems will be employed during storage, transfer, and mixing activities. Tarpaulins, spill pallets, drip pans, and drop clothes, will be used whenever paint and thinners area mixed. Spill containment devices selected for use at the facility offer protection not just for spills, but also for leaks that develop in the paint containers.

Outdoor Storage Systems include:

- A. Paint mixing metal sheds offer protection from rain, protection from liquid paint cans and liquid paint & solvent drums. For drum storage sump capacity = 150 % gallon
- B. Paint storage: There are four standard steel shipping containers in the main yard. At Graving Dock #1 there is a cement block paint storage area with a steel door. These containers are all outside. These containers and building protect whatever is stored inside from rain and

humidity. The capacity of each container exceeds the maximum volume of flammable liquids allowed by Fire Code of 1000 gallons each.

Solvent and paint spills will be treated the same as oil spills, and require spill response procedures, to prevent spill from reaching storm drains and surface waters. Absorbents and other spill response items will be available in mixing areas.

**BMP NUMBER:** 12

**BMP NAME:** SHIPBOARD PROCESS (AND COOLING) WATER HANDLING AND DISPOSAL

**TARGETED ACTIVITY:** SHIPBOARD PROCESS

**TARGETED POLLUTANT(s):** PROCESS AND COOLING WATER

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**DESCRIPTION:**

Process and cooling water used aboard ships shall cease during dry dock operations. Shipboard waste will be kept separate from sanitary wastes, to minimize disposal costs of sanitary wastes. Connecting hoses that pump to holding tanks located on berths shall be visually inspected for leaks. This water shall be kept from contact with spent abrasive and paint to avoid pollution from runoff to the receiving waters. If a leak is discovered, the system shall be secured until such time the leak may be repaired. The facility shall implement spill control practices, BMP #4 of this plan to ensure the cleanup of any spills. Disposal of shipboard wastewaters shall be conducted under contract to a licensed disposal firm.

**BMP NUMBER:** 13

**BMP NAME:** SHIPBOARD SANITARY WASTE DISPOSAL

**TARGETED ACTIVITY:** SHIPBOARD PROCESS

**TARGETED POLLUTANT(s):** SANITARY WASTES

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**DESCRIPTION:**

Ships under repair will not be permitted to discharge sanitary waste into the waters of New York Harbor. Sanitary waste, both grey water and black water, from the ship being repaired will be discharged directly from the ships holding tanks to a licensed commercial waste disposal company. This can be either the sewage line of the shipyard or a mobile holding tank. The appropriate material transfer procedures, including spill prevention and containment activities shall be observed.

**RECORDS RETENTION:**

When the facility is using a mobile sewage hauler, the facility will retain in their files a copy of their contract with a licensed waste disposal company(s), Bills-of-Laden, manifest(s) or other pertinent documents. These receipts shall be maintained and shall be available for inspection, upon request from the regulatory agencies.



**BMP NUMBER:** 14

**BMP NAME:** BILGE AND BALLAST WATER

**TARGETED ACTIVITY:** SHIPBOARD PROCESS

**TARGETED POLLUTANT(s):** OIL AND GREASE, TURBIDITY (HEAVY METALS) & pH

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**DESCRIPTION:**

Bilge waters cannot be legally discharged to state waters if they contain oils, solvents, detergents, or other additives. Ballast water area a concern for several reasons, first the contents are unknown. Any water that has oil, solvents, detergents, or other additives cannot legally be discharged into the graving dock. The U.S.C.G. ballast water regulations also bring the subject of ballast water into legislative regulations. The ballast water regulations stipulate that if the ballast water was taken on at a location not in the New York Coast Guard zone it can't be discharged into New York Harbor. Most ballast water would not have been loaded in the New York harbor area. If the vessel has an installed Ballast Water management system and has treated the water and the water has no oil, solvents, detergents, or other additives, then it may be placed in the graving dock. The ballast water regulations go into effect as follows:

Ballast Water Capacity of vessel	Date of Compliance
Less than 1500 m <sup>3</sup>	1 Jan 2016
1,500 to 5,000 m <sup>3</sup>	1 Jan 2014
Greater than 5,000 m <sup>3</sup>	1 Jan 2016

If the vessel has ballast water for discharge, does not have a fixed Ballast Water management system and it falls into a category which indicates it needs to comply, the options for the vessel and shipyard are to (1) store the ballast water to be placed back aboard when work is done, (2) rent or purchase a system for the water to flow through before it goes into the graving dock, or (3) take the ballast water off the vessel and have it sent out for disposal by a licensed commercial disposal contractor.

**RECORD RETENTION:**

The facility shall retain in their files a copy of their contract with the licensed waste disposal company, (2) Bills-of-laden, manifest(s) or other pertinent documents. These receipts will be maintained and be available for inspection, upon request from the regulatory agencies.

**BMP NUMBER:** 15

**BMP NAME:** PERSONNEL TRAINING AND AWARENESS

**TARGETED ACTIVITY:** ALL

**TARGETED POLLUTANT(s):** ALL

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**DESCRIPTION:**

Increased employee awareness of pollutant sources and pollution prevention shall be implemented by conducting training programs for supervisors, foremen, and all employees. Waste Minimization / Pollution Prevention Programs shall be combined with existing worker safety and environmental programs, to emphasize and enforce the implementation of the Best Management Practices.

The facility employees, independent contractors, and customers will be informed about BMP practices. Copies of BMP's and any specific management plans, including emergency phone numbers, shall be posted in the work areas.

**TABLE 2 – STORM WATER DRAINAGE SYSTEM DESIGNS**

## Storm Water Flow & Annual Run-off Flow Analysis GMD Shipyard, Brooklyn, New York

Storm runoff is computed using the Rational Method,  $Q=CIA$ . The composite values of the runoff coefficient "C", are based on  $C=0.8$  for impervious areas including paved surfaces and roofs of buildings:

$$Q_R(\text{cfs}) = CIA$$

$$A(\text{acre}) = \text{service area}$$

Contributing drainage areas, "A," are estimated based on the drainage system configuration, catchment area, and engineering judgement, as site grading plans and storm riser diagrams for the buildings are not available. In accordance with the New York City Department of Environmental Protection (DEP) recommendations, the storm flows are computed for a ten-year storm.

Daily precipitation data from Central Park, New York (1996-1997) were used to evaluate the rainfall flow and runoff at the Facility. The precipitation data was published by the Northeast Regional Climate Center and obtained from DEP.

### 1. Annual Run-off Flow Analysis

The annual Run-off flow,  $Q_T$ , in 1997 is simply estimated by using the product of the normalized monthly precipitation,  $\Sigma P_m$ , reported from Northeast Regional Climate Center, and service area, A, and then multiplied by Run-off Coefficient, C:

$$Q_T(\text{gal/Year}) = \Sigma (C P_m A)$$

The calculated annual Run-off Flow is further normalized into daily discharge flow (gpd) and reported in Following Table as a rough estimation for facility planning

**Table 1 - Estimated Annual Run-off Flow for Outfalls 003/004/008/009**

Discharge Points	003 (Berth 7)	004 Berth 8	008 Berth 9	009 (Berth 10)
A (Sq. Ft)	103,150	395,775	237,620	154,115
$\Sigma P_m$ (inch)	47.25	47.25	47.25	47.25
C	0.8	0.8	0.8	0.8
$Q_T$ (gal/Year)	2,430,236	9,324,542	5,598,377	3,630,982
$Q_T$ (gpd)	6,658	25,547	15,338	9,948

### 2. Flow Analysis

The formula  $I(\text{in/hr}) = 125/(t_c + 15)$  is used to determine rainfall intensity, "I," for the design rainfall event (10 year storm). The rainfall intensity is based upon a time of concentration, "t," of seven minutes.

In this formula, the rainfall intensity,  $I$ , is calculated based on the following equation:

$$I \text{ (in/hr)} = 125/(t_c + 15)$$

here,  $t_c$  is travel time which includes travel time on land,  $t_{\text{onland}}$ , and travel time in sewer,  $t_{\text{sewer}}$  :

$$t_c \text{ ( minutes)} = t_{\text{onland}} + t_{\text{sewer}} \geq 7.0$$

The values of  $t_{\text{onland}}$  are estimated by the distance between the merging of service area and inlet of manhole selected and the travel velocity on asphalt pavement,  $V = 1.5 \text{ ft/sec}$ .

When calculating  $t_{\text{sewer}}$ , the hydraulic situation (roughness, slope and velocity) of existing storm drainage system were determined by aging time (32 years), pipe material construction type ( R.C , C.I. and VP) and construction situation (the possibility of bending and breaking). The roughness,  $n$ , is selected as 0.15 (traditional engineering estimation) and the slope,  $S$ , and the velocity,  $V$ , are selected as minimum value. All hydraulic values are listed in Table 2.

$$t_{\text{sewer}} = \sum t_i = \sum (L_i/V_i)$$

$L$  = sewer length between two Manholes selected

The runoff flow identified as peak flow are summarized in Table 2. Full-flow and maximum flow conditions were calculated using Mannings equation.



**TABLE 3 - DRY DOCK DRAINAGE ANALYTICAL RESULTS**

Table 3. Summary of Conventional and PCB Compounds in Surface Waters, Stripping Pump & Stormwater Discharges  
GMD Shipyard Dry Dock No.1, No.5, and No.8.

Conventional Compounds (Concentration in mg/l)	East River Surface Water Grab WQ-SW-03	Dry Dock No.1 Stripping Pump Grab (Outfall 002) DD1-SP-01	Dry Dock No.1 Storm Water Grab (Outfall 002) DD1-SW-02	Dry Dock No.5 Stripping Pump Grab (Outfall 005) DD5-SP-04	Dry Dock No.6 Stripping Pump Grab (Outfall 007) DD6-SP-05	QA/QC Field Blank Grab WQ-FB-06	Sample Mean (x)	Sumation (x <sub>1</sub> )	Sum x <sub>1</sub> <sup>2</sup>	(Sum) <sup>2</sup> /n	Variance (s <sup>2</sup> )	Standard Deviation (S)	90% Upper confidence level (90% UCL)
Fecal Coliform (MPN)	80.0	27.0	110	220	22.0	2 U	94.750	379.000	61713.000	35910.250	8600.917	92.741	170.705
BOD	2.41 U	2.41 U	2.41 U	2.41 U	2.41 U	2.41 U	2.410	9.640	23.232	23.232	0.000	0.000	2.410
Chloride	12900	12800	13000	10400	10600	350	11,700	46,800	553,360,000	547,560,000	1,933,333	1,390	12,839
Nitrate	0.018	0.015	0.37	0.36	0.010	5.38	0.189	0.755	0.267	0.143	0.041	0.204	0.355
Nitrite	0.013	0.018	0.015	0.021	0.020	0.009 U	0.019	0.074	0.001	0.001	0.000	0.003	0.021
Oil & Grease	4.41	4.88	6.28	3.58 U	8.38	4.49 U	5.780	23.120	146.294	133.634	4.220	2.054	7.462
pH-over-aged (pH Units)	7.27	6.41	6.98	7.48	7.51	8.39	7.095	28.380	202.159	201.356	0.268	0.517	7.519
Temperature (°C)	18.9	18.2	18.9	19.0	19.0	18.9	18.775	75.100	1410.450	1410.003	0.149	0.386	19.091
Settleable Solids (m/l)	ND	ND	ND	ND	ND	ND							
Total Suspended Solids (Concentration in ppt)	42.0	22.0	42.0	30.0	18.0	4.58 U	28.000	112.000	3472.000	3136.000	112.000	10.583	36.667
PCB 1016	8.00 U	8.42 U	9.41 U	8.00 U	8.00 U	8.00 U	8.458	33.830	287.445	286.117	0.442	0.665	9.002
PCB 1221	6.00 U	6.32 U	7.08 U	6.00 U	6.00 U	6.00 U	6.345	25.380	161.786	161.036	0.250	0.500	6.754
PCB 1232	5.00 U	5.26 U	5.88 U	5.00 U	5.00 U	5.00 U	5.285	21.140	112.242	111.725	0.172	0.415	5.625
PCB 1242	6.00 U	6.32 U	7.08 U	6.00 U	6.00 U	6.00 U	6.345	25.380	161.786	161.036	0.250	0.500	6.754
PCB 1248	4.00 U	4.21 U	4.71 U	4.00 U	4.00 U	4.00 U	4.230	16.920	71.908	71.572	0.112	0.335	4.504
PCB 1254	3.00 U	3.16 U	3.53 U	3.00 U	3.00 U	3.00 U	3.173	12.690	40.447	40.259	0.062	0.250	3.377
PCB 1260	6.00 U	6.32 U	7.08 U	6.00 U	6.00 U	6.00 U	6.345	25.380	161.786	161.036	0.250	0.500	6.754

Qualifiers:

mg/l - Milligram per liter (Aq) of part per billion (ppm) equivalent

ppt - Part per trillion

U - Not detected; detection limit shown

B - Analyte Found in associated blank as well as sample



Table 3. Summary of Metal Analytes in Surface Waters, Stripping Pump & Stormwater Discharges  
GMD Shipyard Dry Dock No.1, No.5, and No.6.

Metal Analytes (Concentration)	East River	Dry Dock No.1	Dry Dock No.1	Dry Dock No.5	Dry Dock No.6	QA/QC	Statistical Analysis of DD1, DD5, DD6 Data Sets						
	Surface Water	Stripping Pump	Main Pump	Stripping Pump	Stripping Pump	Field Blank	Sample Mean	Sumation	Sum $x_i^2$	$(\text{Sum})^2/n$	Variance	Standard	90% Upper
	Grab WQ-SW-03	Grab (Outfall 002) DD1-SP-01	Grab (Outfall 002) DD1-SW-02	Grab (Outfall 005) DD5-SP-04	Grab (Outfall 007) DD6-SP-05	Grab WQ-FB-06	( $\bar{x}$ )	( $\Sigma x_i$ )			( $S^2$ )	Deviation (S)	confidence level (90% UCL)
Antimony	0.0085 U	0.0085 U	0.014	0.0085 U	0.0085 U	0.0085 U	0.008	0.034	0.000	0.000	0.000	0.004	0.011
Arsenic	0.060	0.049	0.061	0.047	0.051	0.0097 U	0.052	0.208	0.011	0.011	0.000	0.006	0.057
Beryllium	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.0002 U	0.000	0.001	0.000	0.000	0.000	0.000	0.000
Cadmium	0.00070 U	0.00070 U	0.00070 U	0.00070 U	0.00070 U	0.0007 U	0.001	0.003	0.000	0.000	0.000	0.000	0.001
Chromium	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0010 U	0.0011 U	0.001	0.004	0.000	0.000	0.000	0.000	0.001
Copper	0.0031 U	0.0031 U	0.0031 U	0.023	0.018	0.0031 U	0.012	0.047	0.001	0.001	0.000	0.010	0.020
Lead	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.0024 U	0.002	0.010	0.000	0.000	0.000	0.000	0.002
Mercury	0.000020 U	0.000042	0.000020 U	0.000020 U	0.000020 U	0.00002 U	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nickel	0.0050	0.0058	0.0055	0.0060	0.0056	0.0017 U	0.006	0.023	0.000	0.000	0.000	0.000	0.006
Selenium	0.0054	0.0034 U	0.0079	0.0034 U	0.0045	0.0034 U	0.005	0.019	0.000	0.000	0.000	0.002	0.007
Silver	0.016	0.016	0.019	0.014	0.013	0.0003 U	0.016	0.062	0.001	0.001	0.000	0.003	0.018
Thallium	0.0044 U	0.0044 U	0.0044 U	0.0044 U	0.0044 U	0.0044 U	0.004	0.018	0.000	0.000	0.000	0.000	0.004
Zinc	0.012	0.026	0.013	0.024	0.025	0.019	0.022	0.088	0.002	0.002	0.000	0.006	0.027
Cyanide	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.0030 U	0.003 U	0.003	0.012	0.000	0.000	0.000	0.000	0.003

Qualifiers:

mg/l - Milligrams per liter

U - Not detected; detection limit shown

B - Analyte Found in associated blank as well as sample

Table 3. Summary of Volatile Organic Compounds in Surface Waters, Stripping Pump & Stormwater Discharges  
GMD Shipyard Dry Dock No.1, No.5, and No.6.

Volatile Organic Compounds (Concentration in ug/l)	East River	Dry Dock No.1	Dry Dock No.1	Dry Dock No.5	Dry Dock No.6	QA/QC	Statistical Analysis of DD1, DD5, DD6 Data Sets						
	Surface Water	Stripping Pump	Storm Water	Stripping Pump	Stripping Pump	Field Blank	Sample Mean	Sumation	Sum x <sub>1</sub> <sup>2</sup>	(Sum) <sup>2</sup> /n	Variance	Standard	90% Upper
	Grab	Grab (Outfall 002)	Grab (Outfall 002)	Grab (Outfall 005)	Grab (Outfall 007)	Grab	(x)	(x <sub>1</sub> )			(S <sup>2</sup> )	Deviation	confidence level
	WQ-SW-03	DD1-SP-01	DD1-SW-02	DD5-SP-04	DD6-SP-05	WQ-FB-06						(S)	(90% UCL)
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.110	0.440	0.048	0.048	0.000	0.000	0.110
1,4-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.180	0.720	0.130	0.130	0.000	0.000	0.180
1,2-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.180	0.720	0.130	0.130	0.000	0.000	0.180
Dichlorodifluoromethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.130	0.520	0.068	0.068	0.000	0.000	0.130
Chloromethane	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.17 U	0.170	0.680	0.116	0.116	0.000	0.000	0.170
Vinyl Chloride	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.24 U	0.240	0.960	0.230	0.230	0.000	0.000	0.240
Bromomethane	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.43 U	0.430	1.720	0.740	0.740	0.000	0.000	0.430
Chloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.100	0.400	0.040	0.040	0.000	0.000	0.100
Trichlorofluoromethane	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.110	0.440	0.048	0.048	0.000	0.000	0.110
1,1-Dichloroethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.080	0.320	0.026	0.026	0.000	0.000	0.080
Methylene Chloride	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.120	0.480	0.058	0.058	0.000	0.000	0.120
1,1,2-Dichloroethane	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.100	0.400	0.040	0.040	0.000	0.000	0.100
1,1-Dichloroethane	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.110	0.440	0.048	0.048	0.000	0.000	0.110
Chloroform	0.09 U	0.09 U	0.09 U	3.03 U	3.16 U	0.09 U	1.593	6.370	19.183	10.144	3.013	1.736	3.014
1,1,1-Trichloroethane	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.130	0.520	0.068	0.068	0.000	0.000	0.130
Carbon Tetrachloride	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.130	0.520	0.068	0.068	0.000	0.000	0.130
1,2-Dichloroethane	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.030	0.120	0.004	0.004	0.000	0.000	0.030
Trichloroethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.080	0.320	0.026	0.026	0.000	0.000	0.080
1,2-Dichloropropane	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.060	0.240	0.014	0.014	0.000	0.000	0.060
Bromodichloromethane	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.090	0.360	0.032	0.032	0.000	0.000	0.090
2-Chloroethylvinylether	4.25 U	4.25 U	4.25 U	4.25 U	4.25 U	4.25 U	4.250	17.000	72.250	72.250	0.000	0.000	4.250
c-1,3-Dichloropropene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.110	0.440	0.048	0.048	0.000	0.000	0.110
1,3-Dichloropropene	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.160	0.640	0.102	0.102	0.000	0.000	0.160
1,1,2-Trichloroethane	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.090	0.360	0.032	0.032	0.000	0.000	0.090
Tetrachloroethane	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.180	0.720	0.130	0.130	0.000	0.000	0.180
Dibromochloromethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.080	0.320	0.026	0.026	0.000	0.000	0.080
Bromoform	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.110	0.440	0.048	0.048	0.000	0.000	0.110
1,1,2,2-Tetrachloroethane	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.080	0.320	0.026	0.026	0.000	0.000	0.080
Chlorobenzene	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.070	0.280	0.020	0.020	0.000	0.000	0.070
Benzene	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.090	0.360	0.032	0.032	0.000	0.000	0.090
Toluene	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.070	0.280	0.020	0.020	0.000	0.000	0.070
Chlorobenzene	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.070	0.280	0.020	0.020	0.000	0.000	0.070
Ethylbenzene	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.16 U	0.160	0.640	0.102	0.102	0.000	0.000	0.160
m,p-xylene	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U	0.120	0.480	0.058	0.058	0.000	0.000	0.120
o-xylene	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.100	0.400	0.040	0.040	0.000	0.000	0.100
1,3-Dichlorobenzene	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.11 U	0.110	0.440	0.048	0.048	0.000	0.000	0.110
1,4-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.180	0.720	0.130	0.130	0.000	0.000	0.180
1,2-Dichlorobenzene	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	0.180	0.720	0.130	0.130	0.000	0.000	0.180

Qualifiers:

ug/l - Microgram per liter (Aq) of part per billion (ppb) equivalent

U - Not detected; detection limit shown

B - Analyte Found in associated blank as well as sample

Table 3. Summary of Semivolatile Organic Compounds in Surface Waters, Stripping Pump & Stormwater Discharges  
GMD Shipyard Dry Dock No.1, No.5, and No.6.

Semivolatile Organic Compounds (Concentration in ug/l)	East River Surface Water Grab WQ-SW-03	Dry Dock No.1 Stripping Pump Grab (Outfall 002) DD1-SP-01	Dry Dock No.1 Storm Water Grab (Outfall 002) DD1-SW-02	Dry Dock No.5 Stripping Pump Grab (Outfall 005) DD5-SP-04	Dry Dock No.6 Stripping Pump Grab (Outfall 007) DD6-SP-05	QA/QC Field Blank Grab WQ-FB-06	Statistical Analysis of DD1, DD5, DD6 Data Sets						
							Sample Mean (x)	Sumation (x <sub>1</sub> )	Sum x <sub>1</sub> <sup>2</sup>	(Sum) <sup>2</sup> /n	Variance (S <sup>2</sup> )	Standard Deviation (S)	90% Upper confidence level (90% UCL)
N-Nitrosodimethylamine	0.79 U	0.67 U	0.7 U	0.74 U	0.67 U	0.84 U	0.695	2.780	1.935	1.932	0.001	0.033	0.722
Phenol	0.78 U	0.68 U	0.69 U	0.73 U	0.66 U	0.82 U	0.685	2.740	1.880	1.877	0.001	0.033	0.712
bis(2-Chloroethyl)ether	1.04 U	0.88 U	0.92 U	0.98 U	0.88 U	1.1 U	0.915	3.660	3.356	3.349	0.002	0.047	0.954
2-Chlorophenol	0.92 U	0.78 U	0.82 U	0.87 U	0.78 U	0.98 U	0.813	3.250	2.646	2.641	0.002	0.043	0.847
1,3-Dichlorobenzene	1.06 U	0.9 U	0.94 U	1 U	0.9 U	1.13 U	0.935	3.740	3.504	3.497	0.002	0.047	0.974
1,4-Dichlorobenzene	0.88 U	0.75 U	0.79 U	0.83 U	0.75 U	0.94 U	0.780	3.120	2.438	2.434	0.001	0.038	0.811
1,2-Dichlorobenzene	1 U	0.85 U	0.89 U	0.94 U	0.85 U	1.06 U	0.883	3.530	3.121	3.115	0.002	0.043	0.917
bis(2-Chloroisopropyl)ether	1.14 U	0.97 U	1.02 U	1.08 U	0.97 U	1.21 U	1.010	4.040	4.089	4.080	0.003	0.052	1.053
N-Nitroso-di-n-propylamine	1.09 U	0.92 U	0.97 U	1.02 U	0.92 U	1.15 U	0.958	3.830	3.674	3.667	0.002	0.048	0.997
Hexachloroethane	0.78 U	0.67 U	0.7 U	0.74 U	0.67 U	0.84 U	0.695	2.780	1.935	1.932	0.001	0.033	0.722
Nitrobenzene	0.92 U	0.78 U	0.82 U	0.87 U	0.78 U	0.98 U	0.813	3.250	2.646	2.641	0.002	0.043	0.847
Isophorone	0.9 U	0.76 U	0.8 U	0.84 U	0.76 U	0.95 U	0.790	3.160	2.501	2.496	0.001	0.038	0.821
2-Nitrophenol	1.06 U	0.9 U	0.94 U	1 U	0.9 U	1.13 U	0.935	3.740	3.504	3.497	0.002	0.047	0.974
2,4-Dimethylphenol	0.54 U	0.46 U	0.48 U	0.51 U	0.46 U	0.57 U	0.478	1.910	0.914	0.912	0.001	0.024	0.497
bis(2-Chloroethoxy)methane	0.74 U	0.63 U	0.66 U	0.7 U	0.63 U	0.79 U	0.655	2.620	1.719	1.716	0.001	0.033	0.682
2,4-Dichlorophenol	0.52 U	0.44 U	0.46 U	0.49 U	0.44 U	0.55 U	0.458	1.830	0.839	0.837	0.001	0.024	0.477
1,2,4-Trichlorobenzene	0.83 U	0.7 U	0.73 U	0.78 U	0.7 U	0.88 U	0.728	2.910	2.121	2.117	0.001	0.038	0.758
Naphthalene	0.78 U	0.66 U	0.69 U	0.73 U	0.66 U	0.82 U	0.685	2.740	1.880	1.877	0.001	0.033	0.712
Hexachlorobutadiene	0.7 U	0.59 U	0.62 U	0.65 U	0.59 U	0.74 U	0.613	2.450	1.503	1.501	0.001	0.029	0.636
4-Chloro-3-methylphenol	0.83 U	0.53 U	0.56 U	0.59 U	0.53 U	0.66 U	0.553	2.210	1.224	1.221	0.001	0.029	0.576
Hexachlorocyclopentadiene	0.46 U	0.39 U	0.41 U	0.43 U	0.39 U	0.49 U	0.405	1.620	0.657	0.656	0.000	0.019	0.421
2,4,6-Trichlorophenol	0.86 U	0.73 U	0.77 U	0.81 U	0.73 U	0.91 U	0.760	3.040	2.315	2.310	0.001	0.038	0.791
2-Chloronaphthalene	0.9 U	0.76 U	0.8 U	0.84 U	0.76 U	0.95 U	0.790	3.160	2.501	2.496	0.001	0.038	0.821
Dimethyl phthalate	0.78 U	0.66 U	0.69 U	0.73 U	0.66 U	0.82 U	0.685	2.740	1.880	1.877	0.001	0.033	0.712
Acanaphthylene	0.68 U	0.56 U	0.59 U	0.62 U	0.56 U	0.7 U	0.583	2.330	1.360	1.357	0.001	0.029	0.606
2,6-Dinitrotoluene	0.35 U	0.3 U	0.31 U	0.33 U	0.3 U	0.36 U	0.310	1.240	0.385	0.384	0.000	0.014	0.322
Acanaphthene	0.78 U	0.64 U	0.67 U	0.71 U	0.64 U	0.8 U	0.665	2.660	1.772	1.769	0.001	0.033	0.692
2,4-Dinitrophenol	3.61 U	3.06 U	3.21 U	3.4 U	3.06 U	3.83 U	3.183	12.730	40.591	40.513	0.026	0.161	3.315
4-Nitrophenol	0.5 U	0.42 U	0.44 U	0.47 U	0.42 U	0.52 U	0.438	1.750	0.767	0.766	0.001	0.024	0.457
2,4-Dinitrotoluene	0.42 U	0.36 U	0.38 U	0.4 U	0.36 U	0.45 U	0.375	1.500	0.564	0.563	0.000	0.019	0.391
Diethylphthalate	0.31	0.38	0.33	0.23	0.27	0.44 U	0.303	1.210	0.379	0.366	0.004	0.066	0.357
4-Chlorophenyl-phenylether	0.61 U	0.52 U	0.55 U	0.58 U	0.52 U	0.65 U	0.543	2.170	1.180	1.177	0.001	0.029	0.566
Fluorene	0.54 U	0.46 U	0.48 U	0.51 U	0.46 U	0.57 U	0.478	1.910	0.914	0.912	0.001	0.024	0.497
4,6-Dinitro-2-methylphenol	0.67 U	0.57 U	0.6 U	0.63 U	0.57 U	0.71 U	0.593	2.370	1.407	1.404	0.001	0.029	0.616
N-nitrosodiphenylamine	0.53 U	0.45 U	0.47 U	0.5 U	0.45 U	0.56 U	0.468	1.870	0.876	0.874	0.001	0.024	0.487
4-Bromophenyl-phenylether	0.63 U	0.53 U	0.56 U	0.59 U	0.53 U	0.66 U	0.553	2.210	1.224	1.221	0.001	0.029	0.576
Hexachlorobenzene	0.7 U	0.59 U	0.62 U	0.65 U	0.59 U	0.74 U	0.613	2.450	1.503	1.501	0.001	0.029	0.636
Pentachlorophenol	10.5 U	8.9 U	9.34 U	9.88 U	8.9 U	11.1 U	9.255	37.020	343.270	342.620	0.217	0.465	9.636
Phenanthrene	0.58 U	0.5 U	0.52 U	0.56 U	0.5 U	0.63 U	0.520	2.080	1.084	1.082	0.001	0.028	0.543
Anthracene	0.4 U	0.34 U	0.36 U	0.38 U	0.34 U	0.43 U	0.355	1.420	0.505	0.504	0.000	0.019	0.371
Di-n-butylphthalate	0.51	0.71	0.44	0.33	0.42	0.5 U	0.475	1.900	0.983	0.903	0.027	0.164	0.609
Benzidine	25.5 U	21.6 U	22.7 U	24 U	21.6 U	27 U	22.475	89.900	2024.410	2020.503	1.302	1.141	23.410
Fluoranthene	0.52 U	0.44 U	0.46 U	0.49 U	0.44 U	0.55 U	0.458	1.830	0.839	0.837	0.001	0.024	0.477
Pyrene	0.26 U	0.22 U	0.23 U	0.24 U	0.22 U	0.28 U	0.228	0.910	0.207	0.207	0.000	0.010	0.235
Butylbenzylphthalate	0.46 U	0.39 U	0.41 U	0.43 U	0.39 U	0.49 U	0.405	1.620	0.657	0.656	0.000	0.019	0.421
3,3'-Dichlorobenzidine	0.35 U	0.3 U	0.31 U	0.33 U	0.3 U	0.36 U	0.310	1.240	0.385	0.384	0.000	0.014	0.322
Benzo(a)anthracene	0.42 U	0.36 U	0.38 U	0.4 U	0.36 U	0.45 U	0.375	1.500	0.564	0.563	0.000	0.019	0.391
Chrysene	0.5 U	0.42 U	0.44 U	0.47 U	0.42 U	0.52 U	0.438	1.750	0.767	0.766	0.001	0.024	0.457
bis(2-Ethylhexyl)phthalate	1.60	1.30	0.85	1.60	0.79	4.90	1.135	4.540	5.597	5.153	0.148	0.385	1.450
Di-n-octylphthalate	0.63 U	0.53 U	0.56 U	0.59 U	0.53 U	0.66 U	0.553	2.210	1.224	1.221	0.001	0.029	0.576
Benzo(b)fluoranthene	0.76 U	0.64 U	0.67 U	0.71 U	0.64 U	0.8 U	0.665	2.660	1.772	1.769	0.001	0.033	0.692
Benzo(k)fluoranthene	0.4 U	0.34 U	0.36 U	0.38 U	0.34 U	0.43 U	0.355	1.420	0.505	0.504	0.000	0.019	0.371
Benzo(a)pyrene	0.19 U	0.16 U	0.17 U	0.18 U	0.16 U	0.2 U	0.168	0.670	0.113	0.112	0.000	0.010	0.175
Ideno(1,2,3-cd)pyrene	0.38 U	0.32 U	0.34 U	0.36 U	0.32 U	0.4 U	0.335	1.340	0.450	0.449	0.000	0.019	0.351
Dibenzo(a,h)anthracene	0.55 U	0.47 U	0.49 U	0.52 U	0.47 U	0.59 U	0.488	1.950	0.952	0.951	0.001	0.024	0.507
Benzo(g,h,i)perylene	0.28 U	0.24 U	0.25 U	0.27 U	0.24 U	0.3 U	0.250	1.000	0.251	0.250	0.000	0.014	0.262

Qualifiers:

ug/l - Microgram per liter

U - Not detected; detection limit shown

J - Estimated value. The result is less than the qualification limit

D - Compound identified at a secondary dilution

B - Analyte Found in associated blank as well as sample

**TABLE 4 – INDUSTRIAL CHEMICAL SURVEY & MSDS**

## Industrial Chemical Survey (ICS)

Name of Substance	Code if any	Average Annual Use	Amount on Hand	Gallon or lbs	Purpose of use (State whether produced, reacted, blended, packaged, distributed, no longer used, etc)
T-10 Thinner	T10	1205	25	gal	COT- Marine Paint for surface coating
OXYGEN liquid	OXY	400000	2500	lbs	Burning steel
CARBON DIOXIDE	CO2	30000	8000	lbs	To inert tanks, also for fire extinguisher
DIESEL FUEL	-	62500	3000	gal	Fuel equipment
ANTIFREEZE	-	3000	600	gal	Maintenance of equipment
ABC Ablative Antifouling		3000	30	gal	COT- Marine Paint for surface coating
Amercoat 214 Antifoulant	-214-70	400	0	gal	COT –Marine Paint for surface coating
Amercoat 229 epoxy	229-29	40	0	gal	COT – Marine Paint for surface coating
Amercoat 235 epoxy	235-35	1100	20	gal	COT- Marine Paint for surface coating
Intershield 300V	300V SV	40	0	gal	COT- Marine Paint for surface coating
Ameron 385 epoxy	385PG	350	0	gal	COT- Marine Paint for surface coating
Amercoat 450H urethane	450H	100	0	gal	COT- Marine Paint for surface coating
Amercoat 5450 alkyd	5450-35	300	5	gal	COT- Marine Paint for surface coating
Ameron 65 solvent	65	60	0	gal	COT- Marine Paint for surface coating
Dev Prep 88 Cleaner	88	120	0	gal	COT- Marine Paint for surface coating
Interspeed 6400NA antift	BQA674	200	0	gal	COT- Marine Paint for surface coating
Intertuf 264 epoxy	FPL274	30	0	gal	COT- Marine Paint for surface coating
GTA007 thinner	GTA007	20	0	gal	COT- Marine Paint for surface coating
GTA200 thinner	GTA200	20	0	gal	COT- Marine Paint for surface coating
Interzinc 75V	EPA075	30	0	gal	COT- Marine Paint for surface coating
Interzone 1000 non skid	1000	10	0	gal	COT- Marine Paint for surface coating
Amercoat 140 epoxy	140-03	20	0	gal	COT- Marine Paint for surface coating
Fuel Treatment microbioc	F99	20	5	gal	Fuel treat to prevent microbe growth
MOBIL DTE 15M	Hyd fld				Hydraulic oil for equipment
ElectroKleen 2	-	2000	1000	gal	Clean electrical components in pumps
Wire rope lubricant	-	400 gal	30	gal	Maintain crane wires
Calcium chloride	-	4000	400	Lbs	Facility ice melting for safety
Mobil DTE 10	oil	4000	1000	Gal	Maintenance of facility equipment
10W30 oil	-	2500	350	Gal	Maintenance of facility equipment

INVENTORY MSDS

<b>GMD SHIPYARD</b>		
<b>BROOKLYN NAVY YARD</b>		
<b>INVENTORY OF MATERIAL SAFETY DATA SHEET</b>		
<b>CLEANERS</b>		
<b>MANUFACTURER</b>	<b>CONTACT TEL. NO.</b>	<b>PRODUCT/ CHEMICALS FAMILY</b>
DIVERSEY LEVER INC.	1-800-831-9889	ASSIST / LAUDRY BUILDER
	1-800-862-8883	DIVERFORCE L4 / ALKALINE LIQUID MACHINE DETERGENT
		DIVERSEY UNPAK G3 / ALKALINE MACHINE DETERGENT
		RUST REMOVER / LIQUID ACID CLEANER
		SUPER INPEDE / CHLORINATED LAUNDRY CONCENTRATE
		UNIPAK G-1 / ALKALINE MACHINE DETERGENT
		UNIPAK G-7 / ALKALINE CHLOINATED CLEANER
RCI/ RUBACHEM, INC.	1-800-548-3285	CONTACT & CIRCUIT CLEANER
		SUPER PTB CLEANER AND DEGREASER
<b>METAL PREPARATION CHEMICALS</b>		
<b>MANUFACTURER</b>	<b>CONTACT TEL. NO.</b>	<b>PRODUCT/ CHEMICALS FAMILY</b>
ALLOY RODS CORP.	1-717-637-8911	ATOM ARC COVERED LOW HYDROGEN ELECTRODES
		MILD STEEL COVERED ELECTRODES
AETNA GAS PRODUCTS, INC.	1-201-359-4600	ACETYLENE GAS
BARTON MINES CORP.	1-303-233-1145	GMA GARNET BLASTING ABRASIVE / ALMANDITE GARNET
EXXON COMPANY	1-713-656-3424	PROPANE / PETROLEUM HYDROCARBON
LIQUID AIR CORPORATION	1-415-977-6500	OXYGEN / OXIDIZER
THE NESAB GROUP, INC.	1-717-637-8911	ALLOY RODS SUREWELD MILD STEEL AND LOW ALLOY COVERED ELECTRODE
		ALLOY RODS ATOM ARC LOW HYDROGEN WELDING ELECTRODES
THE SKYBRYTE COMPANY	1-216-771-1590	OSPFO METAL TREATMENT
<b>MISCELLANEOUS PRODUCTS</b>		
<b>MANUFACTURER</b>	<b>CONTACT TEL. NO.</b>	<b>PRODUCT/ CHEMICALS FAMILY</b>
ASHLAND CHEMICAL CO.	1-800-325-3751	AMERZINE CORROSION INHIBITOR / WATER HYDRAZINE
RCI/ RUBACHEM, INC.	1-800-548-3285	HERMES PLUS GERMICIDAL DETERGENT & DEODORANT

INVENTORY MSDS

MANUFACTURER	CONTACT TEL. NO.	PRODUCT/ CHEMICALS FAMILY
AMERRON PCG	1-201-332-1100	BUTYRAL WASH PRIMER
INTERNATIONAL	1-201-686-1300	INTERZINX 22 GREEN SILICATE BASE
INTERNATIONAL INTERLUX	1-713-682-1711	INTERZINC 75 EPOXY PRIMER RED
<b>PAINTS - THINNERS</b>		
MANUFACTURER	CONTACT TEL. NO.	PRODUCT/ CHEMICALS FAMILY
INTERNATIONAL INTERLUX	1-713-682-1711	INTERNATIONAL THINNER
PROTECTIVE COATINGS	1-714-529-1951	AMERCOAT THINNER
<b>PETROLEUM OIL PRODUCTS</b>		
MANUFACTURER	CONTACT TEL. NO.	PRODUCT/ CHEMICALS FAMILY
A. MARGOLIS & SONS CORP.	1-718-467-7665	PETROLEUM BASE STOCK / PETROLEUM HYDROCARBON
AMERADA HESS CORP.	1-908-750-6000	DYED PREMIUM DIESEL FUEL
ASHLAND CHEMICAL CO.	1-614-790-3333	AMERSTATE 10 FUEL TREATMENT MICROBIOCIDE
CHEVRON USA PRODUCTS COMPANY	1-800-822-5823	CHEVRON TURBINE OIL SYMBOL 2190 TEP
EXXON	1-713-656-3424	SPARTAN SYNTHETIC EP 220 / SYNTHETIC LUBRICATING OIL
		RONEX MP / PETROLEUM LUBRICATING GREASE
		NUTO H 32 / PETROLEUM LUBRICATING OIL
<b>WATER TREATMENT CHEMICALS</b>		
MANUFACTURER	CONTACT TEL. NO.	PRODUCT/ CHEMICALS FAMILY
ASHLAND CHEMICAL CO.	11-800-325-3751	ADJUNCT B PHOSPHATE BOILER WATER TRT /SALTS
		AMEROYAL EVAPORATOR TREATMENT
FMC	1-201-541-4171	TRISODIUM PHOSPHATE/ PHOSPHATE

## INVENTORY MSDS

MANUFACTURER	CONTACT TEL. NO.	PRODUCT/ CHEMICALS FAMILY
AMERON PROTECTIVE COATINGS DIVISION	1-714-529-1951	ALKYD DECK BLACK / ALKYD
		BLACK VINYL A/F / VINYL ANTIFOULING COATING
		F 30 DOD-E-115C / ALKYD COATING
		MIL-P-2441/FOMULA 151 COMPONENT A/ EPOXY COATING
		MIL-P-2441/FOMULA 152 COMPONENT A/ EPOXY COATING
		MIL-P-2441/FOMULA 154 COMPONENT A/ EPOXY COATING
		MIL-P-2441/FOMULA 156 COMPONENT A/ EPOXY COATING
		MIL-P-2441/FOMULA 151-157 COMPONENT B / EPOXY COATING
		MIL-P-15931 TYLCL1 GNB / VINYL ANTIFOULING COATING
		SILICONE ALKYD HAZE GRAY / ALKYD
CROSSFIELD PRODUCTS CORP.	1-908-245-2800	DEX-O-TEX TERRAZZO "M" BASECOAT AGGREGATE / LIMESTON
		DEX-O-TEX TERRAZZO "M" UNDERLAYMENT AGGREGATE/SAND
		TERRAZZO "M" BASECOAT, COMP. C / EXPOXY
		TERRAZZO "M" BASECOAT, COMP.D / AMINE COMPOUND
		TERRAZZO "M" CLEARSEAL, COMP. G / EPOXY
		TERRAZZO "M" CLEARSEAL, COMP. H / AMINE COMPOUND
		TERRAZZO "M" UNDERLAYMENT, COMP. C / EPOXY
		TERRAZZO "M" UNDERLAYMENT, COMP. D / AMINE
DEVOE COATINGS COMPANY	1-502-897-9861	ABC#3 BLACK ABLATIVE ANTIFOULING COATING
		BAR-OX 450 ALKYD GLOSS ENAMEL MEDIUM GREEN
		BAR RUST 235 MULTI PURPOSE EPOXY COATING, HAZE GRAY BASE
		BAR RUST 235 MULTI PURPOSE EPOXY COATING CLEAR CONVERTER
		CATHA COAT 302H REINFORCED INORGANIC ZINC PRIMER, GREEN BASE
		CATHA COAT 302H REINFORCED INORGANIC ZINC PRIMER, CLEAR CONVERTER
		DEVGRIP 137 EPOXY PRIMER FOR NON SKID BUFF BASE
		DEVGRIP 138HR HEAVY-DUTY EPOXY NON SKID COATING DARK GRAY BASE
		DEVAN 184--- 1005 SOLIDS EPOXY TANK COATING #3 MIST GRAY BASE
		DEVAN 214 PERMANENT RED ANTIFOULING PAINT
		DEVAN 224HS HIGH BUILD EPOXY COATING HAZE GRAY BASE
		DVERAN 224HS NEUTRAL CONVERTER
		DEVAN 229 OCEAN GRAY 26173 BASE
		DEVAN 229 CLEAR CONVERTER
		DEVAN 230 HIGH BUILD EPOXY COATING, HAZE GRAY BASE
		DEVAN 230 HIGH BUILD EPOXY COATING, CLEAR CONVERTER
INTERNATIONAL MARINE COATINGS	1-713-682-1711	INTERCLENE ANTIFOULING RED
		INTERCLENE BCA449 SUPER RED
		INTERLAC HAZE GRAY
		INTERLINE 785 TANK LINING EPOXY WHITE
		INTERGARD SUPER FINISH WHITE BASE
		INTERTUF LIGHT GRAY
		INTERZINC 22 POWDER
ITW PHILADELPHIA RESINS	1-215-855-8450	CHOCKFAST ORANGE HARDENER /AMINES
		CHOCKFAST ORANGE RESINS /EPOXY, RESIN SOLUTION
		CHOCKFAST ORANGE RESINS /EPOXY RESIN
U.S. ANCHOR CORP.		RESIN CAPSULET



**TABLE 5 - SPILL RESPONSE & CONTAINMENT EQUIPMENT**

## TABLE 5 – SPILL RESPONSE AND CONTAINMENT EQUIPMENT

(40 CFR 264.175)

ITEM	UNITS	Dimensions	GRAINGER CATALOG
<b>Outdoor Storage &amp; Containment</b>			
55 gal drums, open head	8	3' x 4' cylinder	Item # 15V901 (Brady SC-DP4) PIG, PAK 442 PIG, PLR 224
85 gal drums, plastic open head	4	3.5' x 5' cylinder	
Drum Spill Containment Pallet, 4 dr	3	17" x 52" x 52"	
Pallet Covers (4 drums)	4	-	
Drain Blockers	20	24" x 24"	
<b>Indoor Storage and Containment</b>			
Modular Pallet System A (4 x 55 gal Hozizontal Dispensers)	3	61" x 58" x 78"	P&D, K17-3003 4A13 16F
<b>Transfer &amp; Transportation</b>			
Drum Funnel (Locking Required)	2	-	Grainger Drum Funnel steel Pig, PAN 205 Pig, DRM 619 Pig, PAN 401
Low Profile Fluid Recovery Pan	5	-	
Bladder Drum Truck	2	-	
Outdoor Drip Pan	5	-	
<b>SPILL RECOVERY EQUIPMENT</b>			
XLG Poly Kit	2	-	Pig, 404-01

**TABLE 6 – LIST OF SIGNIFICANT SPILLS & LEAKS**

### TABLE 6

**Title:** \_\_\_\_\_

Date: \_\_\_\_\_

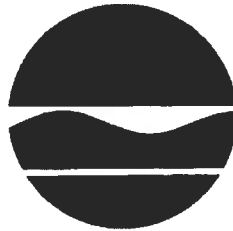
**Directions:** Record below all significant spills and significant leaks of Toxic or Hazardous pollutants that have occurred at the Facility in the three years prior to the effective date of the permit.

**Definitions:** Significant spills include, but are not limited to, releases of oil or hazardous substances in excess of reportable quantities.

[illegible]

**APPENDIX A – SPDES INDIVIDUAL PERMIT APPLICATION**

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
Division Of Water



**APPLICATION FORM NY-2C  
for  
Industrial Facilities**

*This form must be completed by all persons applying for a new SPDES permit OR a modification of an existing SPDES permit for the discharge of industrial wastewater to the waters of New York State.*

**SEE GENERAL INSTRUCTIONS INSIDE COVER**

**STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES)**

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## **GENERAL INSTRUCTIONS**

**NOTE: Form NY-2C replaces existing EPA Forms 1, 2C, 2D and associated supplemental forms for new and modified SPDES Permit applications in New York State. Use NYSDEC Form 91-20-5, "NOTICE/RENEWAL APPLICATION/PERMIT," for routine SPDES permit renewals where no significant changes to your facility's operations have occurred.**

1. New permits and new process discharges - Some of the requirements in this application associated with effluent data are not pertinent to new discharges. Substitute, where appropriate, effluent data from a similar facility or your best estimate. When effluent data from a similar facility is used, indicate such on the application.
2. If you are filing this application to obtain a new permit or modification of an existing permit, it must be filed with the Regional Permit Administrator for the DEC Region in which the discharge is located. The correct address and telephone number are listed on the facing page.

If you are filing this application in response to an Information Request under the Environmental Benefit Permit Strategy (EBPS), please follow the filing instructions contained within the request.

3. Federal and state laws require that you obtain a permit to discharge any of the Priority Pollutants listed in Table 6. If you know or have reason to believe that any of the pollutants listed in Table 6 are present in the discharges from this facility, you must submit test results (for each identified parameter) conducted on at least one representative sample (grab or 24 hour composite) taken within the last three years.
4. Actual measured values of all positive analytical results obtained above the Method Detection Limit (MDL)<sup>1</sup>, or the matrix specific MDL, whichever is greater, for all monitored parameters shall be recorded and reported, as required by this application. Samples shall be taken from as close as practicable to the proposed monitoring locations listed in this application, or from locations as required under applicable regulations.
5. Applications for certain modifications of a SPDES permit do not require all sections of this application to be completed. Exceptions are determined on an individual basis related to the applicability of the information required by this form to the requested modification, or the Department's need to evaluate the current permit for deficiencies. All applications for a permit modification must include a letter or other document describing (as applicable) the changes or planned changes in the nature of the discharge, a description and justification for any requested permit modification, and the reason why an exemption should be granted from completing and filing any or all sections in this application form. You will be informed of what (if any) additional information must be provided. Questions regarding sections to be completed by a particular industry, or regarding technical aspects of the application, should be directed to either the appropriate Regional Water Engineer at the address listed on the following page or the Bureau of Water Permits at (518)402-8111.
6. Applications filed in response to an Information Request under EBPS do not require all sections of this application to be completed. Complete any items in the application for which changes have been made or information has been discovered since your last previously submitted full application form, any items that are specifically referenced for completion in the Information Request, and Section III (Sampling Information) for all outfalls at your facility. For any items that have not changed since your last previously submitted full application form, indicate "No Changes" in that portion of the form.
7. The Federal Clean Water Act of 1977 (P.L. 95-217), as amended, Section 309(c)(4), states: "Any person who knowingly makes false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this act or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this act, shall upon conviction, be punished by a fine not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both.
8. Any and all information submitted as part of this SPDES application shall be considered public information and is therefore subject to Freedom of Information Law requests. Any information that the applicant wishes to remain confidential, such as information requested on the Industrial Chemical Survey form, must be submitted under separate cover. Those sections of this application which are eligible for confidentiality are noted in the appropriate sections of these instructions. The Department will treat each request for confidentiality individually.

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<sup>1</sup> The Method Detection Limit (MDL) is the level at which the analytical procedure referenced is capable of determining with a 99% probability that the substance is present. This value is determined in distilled water with no interfering substances present.



**FILING LOCATIONS FOR SPDES APPLICATIONS****MODIFICATIONS, NEW APPLICATIONS** and other questions concerning your SPDES permit: Follow instructions below.

The Filing Location depends on the county in which the discharge is located. To determine the mailing address for the proper Filing Location, find the county in which the discharge is located in the table below. Use the letter in the "KEY" column to the right of the county name to find the proper mailing address in the list at the right. All applications for new permits, permittee-requested modifications, and modification of SPDES permits under the Environmental Benefit Permit Strategy (EBPS) must be mailed to the appropriate New York State Department of Environmental Conservation (NYSDEC) Regional or Sub-Regional office listed below.

Discharge Location			Discharge Location			Discharge Location			Discharge Location		
County	Region	KEY	County	Region	KEY	County	Region	KEY	County	Region	KEY
Albany	4	D	Fulton	5	G	Orange	3	C	Sullivan	3	C
Allegany	9	L	Genesee	8	K	Orleans	8	K	Tioga	7	J
Broome	7	J	Greene	4	D	Oswego	7	J	Tompkins	7	J
Cattaraugus	9	L	Hamilton	5	F	Otsego	4	E	Ulster	3	C
Cayuga	7	J	Herkimer	6	I	Putnam	3	C	Warren	5	G
Chautauqua	9	L	Jefferson	6	H	Rensselaer	4	D	Washington	5	G
Chemung	8	K	Lewis	6	H	Rockland	3	C	Wayne	8	K
Chenango	7	J	Livingston	8	K	St. Lawrence	6	H	Westchester	3	C
Clinton	5	F	Madison	7	J	Saratoga	5	G	Wyoming	9	L
Columbia	4	D	Monroe	8	K	Schenectady	4	D	Yates	8	K
Cortland	7	J	Montgomery	4	D	Schoharie	4	E	Bronx	2	B
Delaware	4	E	Nassau	1	A	Schuyler	8	K	Kings	2	B
Dutchess	3	C	Niagara	9	L	Seneca	8	K	New York	2	B
Erie	9	L	Oneida	6	I	Steuben	8	K	Queens	2	B
Essex	5	F	Onondaga	7	J	Suffolk	1	A	Richmond	2	B
Franklin	5	F	Ontario	8	K						

**REGIONAL FILING ADDRESSES AND TELEPHONE NUMBERS**

KEY	Mailing Address: Mail Application to "Division of Environmental Permits"	Regional Permit Administrator Telephone	Regional Water Engineer Telephone
A	NYSDEC REGION 1, Building 40 SUNY, Stony Brook, NY 11790-2356	(631) 444-0355	(631) 444-0405
B	NYSDEC REGION 2, One Hunters Point Plaza, 47-40 21st St, Long Island City, NY 11101-5407	(718) 482-4997	(718) 482-4933
C	NYSDEC REGION 3, 21 South Putt Corners Rd., New Paltz, NY 12561-1696	(845) 256-3059	—
	NYSDEC REGION 3 SUB-OFFICE, 200 White Plains Rd., Tarrytown, NY 10591-5805	—	(914) 332-1835
D	NYSDEC REGION 4, 1150 North Westcott Road., Schenectady, NY 12306-2014	(518) 357-2069	(518) 357-2045
E	NYSDEC REGION 4 SUB-OFFICE, Route 10, Jefferson Road, Stamford, NY 12167-9503	(607) 652-7364	—
F	NYSDEC REGION 5, Route 86, PO Box 296, Ray Brook, NY 12977-0296	(518) 897-1234	—
G	NYSDEC REGION 5 SUB-OFFICE, Hudson St., Warrensburg, NY 12885-0220	(518) 623-3671	(518) 623-3671
H	NYSDEC REGION 6, State Office Bldg., 317 Washington St., Watertown, NY 13601-2245	(315) 785-2245	—
I	NYSDEC REGION 6 SUB-OFFICE, State Office Building., 207 Genesee St., Utica NY 13501-2885	(315) 793-2555	(315) 793-2554
J	NYSDEC REGION 7, 615 Erie Boulevard West, Syracuse, NY 13204-2400	(315) 426-7438	(315) 426-7500
K	NYSDEC REGION 8, 6274 East Avon-Lima Rd., Avon, NY 14414-9519	(585) 226-2466	(585) 226-2466
L	NYSDEC REGION 9, 270 Michigan Ave., Buffalo, NY 14203-2999	(716) 851-7165	(716) 851-7070

CONTACT THE ABOVE D.E.P. OFFICES FOR QUESTIONS CONCERNING APPLICATION SUBMITTAL.

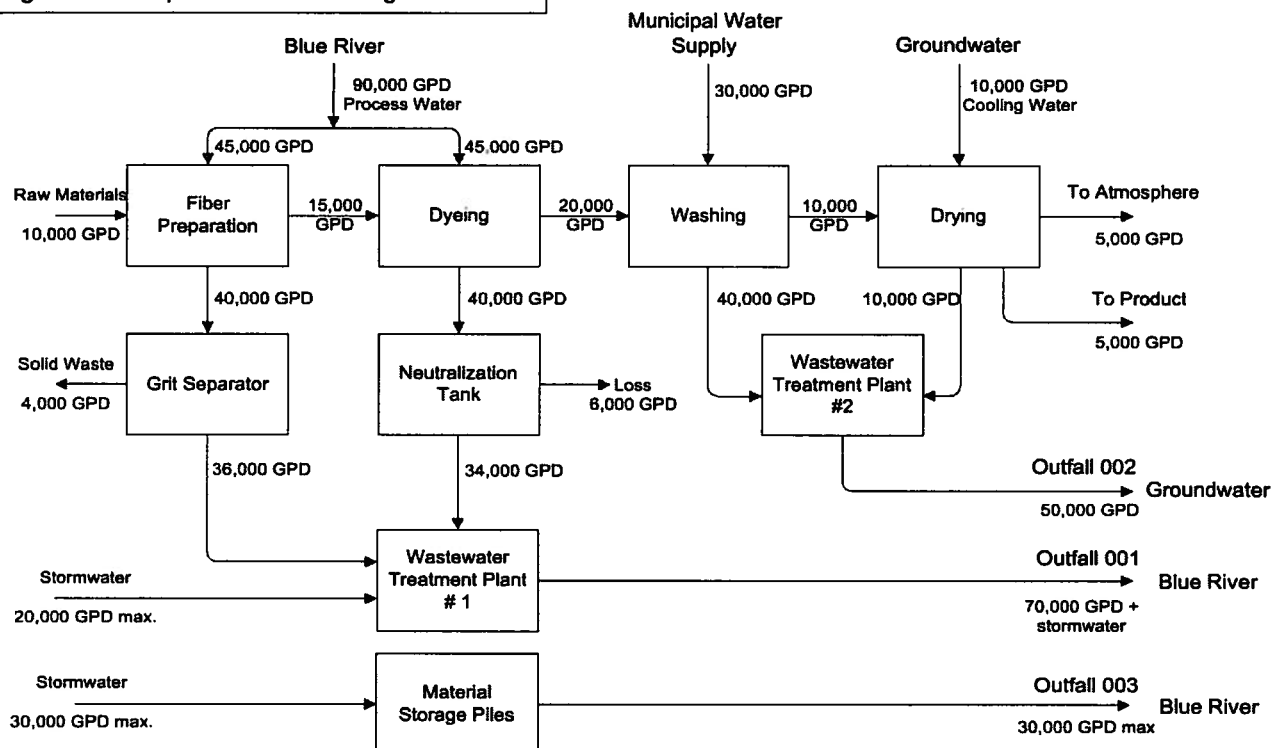
**RENEWALS ONLY:** NYSDEC - Environmental Permits, Permit and Registration Services, 625 Broadway, 4h Floor, Albany, NY 12233-1750  
For questions, call: (518) 402-9170

State Pollutant Discharge Elimination System (SPDES)  
**INDUSTRIAL APPLICATION FORM NY-2C**  
 For New Permits and Permit Modifications  
**APPLICATION INSTRUCTIONS**

### **SECTION I - PERMITTEE AND FACILITY INFORMATION**

Complete one copy of this section for your facility. This section applies to all outfalls and processes at your facility. Base your answers on actual data whenever available; otherwise use your best estimate. For new facilities to be built, use proposed design and production estimates. Applicants applying for modification of existing permits should complete information pertaining to changes made or information discovered since your last previously submitted full application form, and for any items that are specifically referenced for completion in the EBPS Information Request.

1. **Current Permit Information:** Provide the seven-digit SPDES Number and the fifteen-digit (formerly sixteen digit; the final digit is no longer required) DEC Number as they appear on page 1 of your existing SPDES permit. Leave this section blank if you are applying for a new proposed discharge or an existing unpermitted discharge.
2. **Permit Action Requested:** Indicate what type of permit action is being requested by checking the appropriate box(es). If an increase in the quantity of water discharged is being requested, describe the reason for the increase.
3. **Permittee name and mailing address:** For corporate or partnership owned facilities, provide the parent company name and the division name. For facilities owned by an individual, provide the owner's name and who they are doing business as. For Federal, State, and Municipally owned facilities, provide the Department name and the Division or Bureau name. For publicly owned facilities, identify the authority or other ownership of the facility and their mailing address.
4. **Facility Name, Address, and Location:** Enter the name, address, and location of the facility or plant. The street address should be the physical location of the facility. If no street address exists for your facility, include a brief location narrative. The mailing address for the facility, where applicable, should include the P.O. Box and the ZIP+4 code. Enter the NYTM coordinates of the main plant site [these may be determined from United States Geological Survey 7.5 minute Quadrangles or NYSDOT topographic or planimetric maps]. Enter the tax map information for all lots occupied by the facility or plant if your facility is located within New York City, Nassau County or Suffolk County.
5. **Facility Contact Person:** Enter the name, title, address, and telephone number of the facility's authorized contact person. This person should be thoroughly familiar with the facts reported on these forms and the associated discharges in the event that contact regarding the permit application must be made.
6. **Discharge Monitoring Report (DMR) Mailing Address:** Enter the address where the DMR forms should be sent. Include the name, signature, and telephone number of the person responsible for signing and submitting DMRs in accordance with the DMR authorization requirements listed on page 13 of these Instructions.
7. **Outfall Summary:** Summarize the outfalls which are present at the facility. Include all outfalls containing process discharges, internal monitoring points delineated in an existing permit, storm water associated with industrial activity, process wastewater discharges to publicly owned treatment works (POTWs), and those that discharge only sanitary wastewater directly to onsite septic systems or leach fields. For two or more substantially similar outfalls, you may group the outfalls for purposes of this summary. If more than 10 outfalls are present at the facility, attach the information for the remaining outfalls to the application on a separate 8½ X 11 sheet of paper. For discharges within sole source aquifers as shown on Figure 2 at the back of these instructions, complete the information requested on Supplement B, "DISCHARGES WITHIN SOLE SOURCE AQUIFERS."
8. **Map of Facility and Discharge Locations:** Provide a detailed map showing the location of the existing or proposed facility, including all buildings or structures present at the facility, wastewater discharge system(s), outfall location(s) into receiving waters, nearby surface water bodies, nearby drinking water supply wells, and groundwater monitoring wells. Also submit proof, either by indication on the map or other documentation, that a right of way for the discharges exists from the facility property to a public right of way. Copies of the site survey map with the above information added are generally acceptable. Geographic information system (GIS) coverages showing your facility, property lines and outfalls may be included at your option if such a coverage is available. Indicate the type of GIS system used to develop the coverage and include a printout of the coverage with the disk containing the coverage.
9. **Water Flow Diagram:** An example of an acceptable line drawing is shown on Figure 1 on the opposite page. Show

**Figure 1 : Sample Water Flow Diagram**

all sources of wastewater, including process and production areas, sanitary flows, cooling water flows, and storm water runoff. The water balance should show daily average flow rates at intake and discharge points and approximate daily flow rates between treatment units, including influent and treatment rates. Use actual measurements whenever available; otherwise, use your best estimate. All processes which contribute wastewater to one or more outfalls, including treatment units, processes and bypass piping, should be identified. Estimate all significant losses of water to products, discharge, and atmosphere. Include any existing or proposed connections to a publicly or privately owned treatment works.

10. **Nature of business:** Briefly describe the nature of your business. Include information on products produced or services provided, and when your facility commenced operations.
11. **SIC Codes:** List, in descending order of significance, the four 4-digit standard industrial classification (SIC) codes and associated descriptions which best describe your facility in terms of the principal products or services you produce or provide. These codes may differ from the SIC codes for those processes contributing to the discharges from your facility.
12. **Primary industry:** List the industrial categories and EPA Parts and subparts which apply to your facility in the provided table if your facility's operations are included among those industries listed in Table 1 on the following page. Note that the primary industrial categories listed below require the submittal of industry-specific production information. Complete the appropriate application supplement if your facility is one of the industries listed below. Copies of these supplements are available from the regional NYSDEC addresses listed on page ii of these instructions.

Application supplements required for specific industries

G: Beverage Industry  
H: Dairy Processors  
I: Fruit and Vegetable Processors

J: Iron and Steel Manufacturing  
K: Meat Processors  
L: Organic Chemicals, Plastics, & Synthetic Fibers

M: Pulp and Paper Mills  
N: Seafood Processors  
O: Steam Electric Generating Facility

13. **Genetic information:** Answer "Yes" to this question if your facility manufactures, handles, or discharges recombinant-DNA, pathogenic or other potentially infectious or dangerous organisms, or other genetic engineering organisms. Attach a detailed explanation of your facility's activities, including organisms present, to this application if you answered "Yes" to this question. You may submit this information under separate cover if you want this information to remain confidential. Sewage treatment plants treating typical sewage and sanitary wastes, and industrial facilities using biological wastewater treatment systems to treat typical industrial and sanitary wastes, should answer "No" to this question.

**TABLE 1**  
**TESTING REQUIREMENTS FOR ORGANIC TOXIC POLLUTANTS INDUSTRY CATEGORY**

**Note: Testing for Metals, Cyanide, and Total Phenolics is required for all categories listed below.**

Federal Register (FR) reference: 48 FR 14153, Apr. 1, 1983, as amended at 49 FR 38050, Sept. 26, 1984; 50 FR 6940, February 19, 1985					
INDUSTRIAL CATEGORY	Categorical 40 CFR Part	GC/MS FRACTION <sup>2</sup>			
		Volatile	Acid	Base/Neutral	Pesticide
Adhesive and sealants		X	X	X	-
Aluminum forming	467	X	X	X	-
Auto and other laundries		X	X	X	X
Battery manufacturing	461	X	-	X	-
Coal mining	434	X	X	X	X
Coil coating	465	X	X	X	-
Copper forming	468	X	X	X	-
Electric and Electronic components	469	X	X	X	X
Electroplating	413	X	X	X	-
Explosives manufacturing	457	X	X	X	-
Gum and wood chemicals (except as noted below) . . . . .	454	X	X	-	-
-- Tall Oil Rosin Subcategory (Subpart D) and Rosin-Based Derivatives Subcategory (Subpart F) of the Gum and Wood Chemicals Industry (40 CFR Part 454) . . . . .	454	X	X	X	-
Inorganic Chemicals manufacturing	415	X	X	X	-
Iron and Steel manufacturing	420	X	X	X	-
Leather tanning and finishing	425	X	X	X	-
Mechanical products manufacturing		X	X	X	-
Metal Molding and Casting	464	X	X	X	-
Nonferrous metals manufacturing	433	X	X	X	-
Nonferrous metals manufacturing	421	X	X	X	X
Ore mining (except Base & Precious Metals Subcategory) . . . . .	440	-	-	-	-
-- Ore mining (Base & Precious Metals Subcategory, Subpart B) . . . .	440	-	X	-	-
Organic chemicals manufacturing	414	X	X	X	X
Paint & ink formulation	446, 447	X	X	X	-
Pesticides	455	X	X	X	X
Petroleum refining	419	X	-	-	-
Pharmaceutical preparations	439	X	X	X	-
Photographic equipment and supplies	459	X	X	X	-
Plastic and synthetic materials manufacturing	414	X	X	X	X
Plastic processing	463	X	-	-	-
Porcelain enameling	466	-	-	-	-
Printing and publishing		X	X	X	X
Pulp and paperboard mills (except as noted below) . . . . .	430	X	X	X	X
-- Paperboard Sulfite Subcategories (Subpart J and U) . . . . .	430	X	X	X	-
-- Deink (Subpart Q), Dissolving Kraft (Subpart F), and paperboard from Wastepaper (Subpart E) . . . . .	430	X	X	-	-
-- BCT Bleached Kraft (Subpart H), Semi-Chemical (Subparts B and C) and Non Integrated Fine Papers (Subpart R) . . . . .	430	-	X	-	-
-- Fine Bleached Kraft (Subpart I), Dissolving Sulfite Pulp (Subpart K), Groundwood-Fine Papers (Subpart O), Market Bleached Kraft (Subpart G), Tissue from Wastepaper (Subpart T), and Non Integrated Tissue Papers (Subpart S) . . . . .	430	X	-	-	-
Rubber Processing	428	X	X	X	-
Soap and detergent manufacturing	417	X	X	X	-
Steam electric power plants (except as noted below) . . . . .	423	X	X	X	-
-- Once-Through Cooling Water, Fly Ash and Bottom Ash Transport Water Process Waste Streams . . . . .	423	X	X	-	-
Textile mills (except Greige Mills Subcategory) . . . . .	410	X	X	X	-
-- Greige Mills Subcategory (Subpart C - Low water use processing of 40 CFR Part 410) . . . . .	410	-	-	-	-
Timber Products Processing	429	X	X	X	X

<sup>1</sup> 40 CFR Parts are listed for those industries with promulgated categorical effluent limitations. For the pulp and paperboard category, use the designations that were effect prior to April 15, 1998.

<sup>2</sup> The pollutants in each fraction are listed in Tables 6 and 7. Requirements as listed in 40CFR Part 122 Appendix D.

Note: "X" = Testing Required; "-" = Testing Not Required, but sampling results should be included if believed present in the discharge.

- 14. Material storage area runoff:** Complete this section if your facility discharges storm water runoff from a material storage area to either surface or ground waters. Material storage areas include coal piles, raw materials stockpiles, finished product stockpiles, active/inactive waste disposal areas, and operations and maintenance stockpiles such as road salt storage areas. List the size of the material storage area, type(s) and quantity of material stored, and whether any controls (covers, berms, sediment control devices, etc.) are maintained on the discharge from the material storage areas.
- 15. Facility Ownership:** Indicate which type of ownership your facility operates under, and whether or not any of the discharges applied for in this application occur on Indian lands.
- 16. Other environmental permits:** Provide the requested information for and status of any other type of federal, state, or local environmental permits that this facility has received or applied for, including but not limited to permits issued under any of the following programs: Air Pollution Control, Radiation Control, Solid Waste Management, Hazardous Waste Management, Oil, Gas, or Solution Salt Mining, Long Island Well, Wetlands Protection, and other SPDES permits. Indicate whether these permits are active (currently in effect), applied for (awaiting issuance) or inactive (deleted, suspended, revoked, etc.). Attach any additional information that you want to include on 8 1/2" x 11" paper as an addendum to this application.
- 17. Laboratory Certification:** Complete this section if any of the chemical or biological analyses reported in Sections II or III of this application were performed by a contract laboratory or consulting firm.
- 18. Certification:** The certification must be signed by one of the following individuals:
- A. For *corporations*, a principal officer of at least the level of vice president. However, for those facilities whose only activities are the production of oil and/or natural gas from underground sources via wells, the officer may authorize a person having responsibility for the overall operations of the well or well field to sign the certification. In that case, the authorization must be written and submitted to the Department as an attachment to this application.
  - B. For *sole proprietorships or partnerships*, a general partner or the proprietor, respectively.
  - C. For *municipalities, State, Federal, or other publicly owned facilities*, a principal executive officer or ranking elected official.
- 19. Industrial Chemical Survey:** Complete all information on this table for any substances listed in Tables 6 through 10 that your facility has used, produced, stored, distributed or otherwise disposed of in significant quantity in the past five years. "Significant quantity" is defined as more than 1,000 gallons per year of a substance or more than 10,000 pounds per year of a substance or, if your facility uses less than the above quantities of materials on an annual basis, the three process substances that your facility uses the greatest quantity of on an annual basis. Also complete all information on this table for any quantity of chemicals for which FDA fish flesh limits exist, chemicals identified as Bioaccumulative Chemicals of Concern (BCCs), or restricted pesticide products as listed in Part 326, Section 2 of the ECL. These chemicals are indicated by Footnote 1 in Tables 6-10. Restricted pesticides also include those products whose labeling bears the statement "Restricted Use Pesticide." Indicate "Yes" in the "Present in Discharge" column for any of the substances listed that are used in a manner which would cause them to come into contact with a wastewater that is ultimately discharged to the waters of the State through an outfall controlled by this permit application. Include sampling results in Section III for any of the substances listed in Tables 6 through 8 that may be present in the discharge from one or more outfalls for each of the affected outfalls. Do not include those chemicals that are present in less than de minimis concentrations as listed on the MSDS sheets for that substance. List all appropriate "Purpose of Use" codes as shown in Table 2 below. You may submit this information under separate cover if you want this information to remain confidential.

**Table 2**  
**Codes for "PURPOSE OF USE" column on ICS form**

Code	Description	Code	Description	Code	Description
PRO	Produced	DEG	Degreasing	COT	Used in closed system
REA	Reacted	RAD	R&D chemical	WTC	Water Treatment chemical
BAS	Blended & used as solvent	LAB	Laboratory use	NLU	No Longer Used
PKG	Packaged/Distributed	PES	Pesticide	OTH	Other (specify)
CLN	Cleaning	HER	Herbicide		

**This concludes the information required for Section I. The instructions for Section II, which requests outfall specific information, begin on the following page.**

**State Pollutant Discharge Elimination System (SPDES)  
INDUSTRIAL APPLICATION FORM NY-2C  
For New Permits and Permit Modifications  
APPLICATION INSTRUCTIONS**

## **SECTION II - OUTFALL INFORMATION**

Make copies of the blank forms for this section and complete this section for each outfall. Base your answers on actual data whenever available; otherwise use your best estimate. Be sure to enter the facility name, outfall number, and SPDES number (if applicable) at the top of each page. Applicants applying for modification of existing permits should complete information pertaining to changes made or information discovered since your last previously submitted full application form, and for any items that are specifically referenced for completion in the EBPS Information Request.

1. **Outfall Number and Location:** Enter the outfall number, latitude and longitude, and the name of the receiving water. For final effluent discharge points, use the following format: 001, 002, 003, etc. For internal monitoring points, such as sampling points located after a categorical process prior to the admixture of other wastewaters, use the following format: 01A, 01B, 01C, etc., where the first two digits correspond to the last two digits of the final effluent discharge point (e.g. 02A and 02B are internal monitoring locations for wastewaters tributary to the discharge from outfall 002). You may use the map you provided for Section I, Item 8 to determine the latitude and longitude of the discharge point. Latitudes and longitudes should be accurate to within 2 seconds if possible.
2. **Type of discharge and discharge rate:** Identify each of the water sources which contribute to this outfall and provide the average flow rates in the spaces provided. Where flow data is unavailable, use your best estimates. If more than four different types of process wastewater discharges contribute to a given outfall, list the remaining process wastewater discharges under the "Other" category, or as an attachment.
3. **Process information:** This information is used to determine the applicable federal regulations for this discharge. The information required to be reported is dependent on the type of facility and process contributing to the discharge. Enter the requested information for each of the process wastewater discharges identified in Item 2 above. All industries should provide the name of each process, description of each process, USEPA category/subcategory of each process (where applicable), and the SIC code for the process. Measures of production shall be provided by all facilities whose operations are listed in Table 1 of these instructions. Table 3 on the following page contains an abbreviated list of various industries and the types of information that each should report in this section of the application. Identify the flows from each process area if your facility is subject to OCPSF or metal finishing categoricals. If more than four different types of process wastewater discharges contribute to a given outfall, list process information on additional copies of this sheet.
4. **Discharge Flow Rates:** This item requests detailed information regarding expected and/or measured flows from each outfall at the facility. Provide current (from the last 12 months) or expected flow rate information as requested. When reporting the Maximum Design Flow Rate, provide the design flow for this specific outfall (e.g. batch treatment system flow, package treatment system flow, or other finite treatment system flow). For storm water discharges, the Maximum Design Flow Rate shall be based on the hydraulic capacity of the discharge structure at the outfall.
5. **Seasonal or Intermittent Discharges:** *Complete this section if the outfall discharges are seasonal or intermittent.* If the treatment facility or process discharges from one to seven days per week throughout the year, check NO and continue with Item 6. If the outfall discharges a few weeks or months per year, check YES and complete the information requested. Each discharge event should be considered one "batch" for non-process discharges. Report the highest daily value for flow rate and total volume in the "Daily Max" columns. Report the average of all daily values measured during days when discharge occurred within the past 12 months in the "LTA" (Long Term Average) columns.
6. **Water supply source:** List all water sources and provide average flow rates. The volume may be estimated from water supply meter readings, pump capacities, etc. Provide the name of the source where applicable (e.g. Hudson River, Lake Ontario, City Water Supply, private groundwater well). Indicate the units of measure in the box following the volume. If necessary, a written description may be provided as an attachment on 8 ½" x 11" paper.
7. **Outfall configuration:** *This section does not have to be completed for discharges to groundwater.* Describe the physical configuration of the discharge point of this outfall, including the distance to the outfall from shore and its location with respect to the receiving water. Use your best estimate for any dimensional information required for which you do not already have accurate measurements. For discharges to estuaries, complete the mixing zone analysis requirements listed on Supplement C: MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES. All stream information should be provided based on low flow conditions. If a diffuser is used, attach a plan drawing of the diffuser as well as the configuration (e.g. number of diffuser ports, height from the bottom of channel, construction material, etc.) of the diffuser.

### TABLE 3 Summary of Information to be Reported by Industry Type

Tabulate actual production data specified below for each month in the last 5 years and include the requested data as an attachment. Please check categorical regulations for your specific industry type for a complete listing of the information to be reported in this application.

- 40 CFR 405 - Dairy Products Processing:** Report mass of raw materials (milk equivalent or fluid raw whey) and mass of BOD5 input of raw materials. If your facility is regulated under Subparts K or L of this category also report total suspended solids of the raw materials. Complete applicable information on Supplement H.
- 40 CFR 406 - Grain Mills:** Report volume of final product per volume of raw material in standard bushels or mean standard bushels (for corn or wheat); hundredweight (rice), or volume per volume on a weight basis (for cereal or wheat flour as raw material).
- 40 CFR 407 - Canned and Preserved Fruits and Vegetables Processing:** Facilities regulated under Subparts A-G report volume per volume (weight basis) of raw materials. Facilities regulated under Subpart H report volume per volume (weight basis) of final product. Complete applicable information on Supplement I.
- 40 CFR 408 - Canned and Preserved Seafood Processing:** Report pounds of seafood to be processed. Complete applicable information on Supplement O.
- 40 CFR 409 - Sugar Processing:** Facilities regulated under Subpart A report volume per volume (weight basis) of final product (crystallized refined sugar). Facilities regulated under Subparts B and C report pounds per ton of melt, where melt is the amount of raw material (sugar) combined within an aqueous solution at the beginning of the process for production of refined sugar cane.
- 40 CFR 410 - Textiles:** Facilities regulated under Subpart A report pounds of wool. Facilities regulated under Subpart B report pounds of fiber. All other subparts report pounds of product.
- 40 CFR 411 - Cement Manufacturing:** Facilities regulated under Subpart A report pounds of final product. Facilities regulated under Subpart B report pounds of dust leached.
- 40 CFR 414 - Organic Chemicals, Plastics and Synthetic Fibers (OCPSF):** Report (1) flow rates of individual process wastewater streams; (2) flow rates of individual metal-bearing or cyanide-bearing wastewater streams; (3) pounds of product generated per year for each product; and (4) indicate if end-of-pipe biological treatment exists. Complete applicable information on Supplement L.
- 40 CFR 415 - Inorganic Chemicals Manufacturing:** Report pounds of product.
- 40 CFR 417 - Soap and Detergent Manufacturing:** Report pounds of anhydrous product.
- 40 CFR 419 - Petroleum Refining:** Report volume of feedstock (number of barrels) and volume of flow.
- 40 CFR 420 - Iron and Steel Manufacturing:** Report pounds of product. If air or vent scrubbers are used at the facility, describe the operations they are used in and indicate the number of scrubbers in use. Complete applicable information on Supplement J.
- 40 CFR 421 - Nonferrous Metals Manufacturing:** Report weight of product produced, cast, or material recovered (see individual subparts for specific materials regulated) and provide a description of each specific process that produces a wastewater stream.
- 40 CFR 423 - Steam Electric Power Generating:** Report volume of flow from process wastewater streams including contact cooling, cooling tower blowdown, and any other wastewaters including noncontact cooling water. Report total rating of electric generating capacity. Complete applicable information on Supplement M.
- 40 CFR 424 - Ferroalloy Manufacturing:** Report (1) megawatt hour(s) of electrical energy consumed in the smelting process (for electric furnaces only), (2) weight of product (for non electric furnaces only and other if appropriate), and (3) weight of raw material processed.
- 40 CFR 425 - Leather Tanning and Finishing:** Report weight of raw material.
- 40 CFR 426 - Glass Manufacturing:** Facilities regulated under Subparts D & E report pounds of product. Facilities regulated under Subparts F & L report pounds of furnace pull. Subpart L facilities also report pounds of product frosted.
- 40 CFR 428 - Rubber Manufacturing:** Report (1) weight of raw material or raw material equivalent and (2) weight of gross production.
- 40 CFR 429 - Timber Products Processing:** Report (1) weight per volume of production and (2) weight of gross production.
- 40 CFR 430 - Pulp, Paper and Paperboard:** Report (1) weight of product, and (2) provide a statement certifying that chlorophenolic containing biocides are not being used at the facility. Complete applicable information on Supplement N.
- 40 CFR 431 - Builder's Paper and Board Mills:** Report pounds of product.
- 40 CFR 432 - Meat Products:** Report (1) weight of raw material (raw material measured in live weight killed or equivalent live weight killed), (2) weight of finished product, and if the facility is regulated under Subparts E-J, (3) the manufacturing rate for individual products. Complete applicable information on Supplement K.
- 40 CFR 433 - Metal Finishing:** Report flow rates of individual processes generating wastewater streams.
- 40 CFR 436 - Mineral Mining and Processing:** If the facility uses HF flotation as a treatment process report weight of total product.
- 40 CFR 439 - Pharmaceutical Manufacturing:** Report long term daily average raw waste (i.e. pre-treatment system) content of BOD5 and COD.
- 40 CFR 440 - Ore Mining and Dressing:** Report (1) treatment or milling technique(s) employed and (2) if the facility is regulated under Subparts F-H or J, report tons of product.
- 40 CFR 461 - Battery Manufacturing:** Report weight of raw materials used, applied, deposited, or processed and (2) weight of cells, powder, or other material produced.
- 40 CFR 463 - Plastics Molding and Forming:** Report average process wastewater usage flow rates for each individual process.
- 40 CFR 464 - Metal Molding and Casting:** Report (1) weight of material poured (casted) and (2) if air scrubbers are used, report volume of air scrubbed. If the facility is regulated under Subpart C report (1) the weight of sand reclaimed (if applicable) and (2) the weight of metal poured annually (if applicable).
- 40 CFR 465 - Coil Coating:** Report (1) the total surface area of the material processed and (2) if the facility is regulated under Subpart D, report the number of cans manufactured.
- 40 CFR 466 - Porcelain Enameling:** Report the total surface area of raw material processed or coated.
- 40 CFR 467 - Aluminum Forming:** Report the weight of raw material (aluminum) processed including rolling, casting, forging, quenching, drawing, extruding, cleaning and etching operations.
- 40 CFR 468 - Copper Forming:** Report weight of raw material (copper) processed including rolling, drawing, heat treating, extruding, annealing, cleaning, pickling, tumbling, burnishing, coating and forming operations.
- 40 CFR 471 - Nonferrous Metals Forming and Metals Powders:** Report weight of raw material processed for various operations (see guidelines for descriptions of processes).
- Beverage Industry (SIC Codes 2082, 2084, 2086) :** Complete application information on Supplement G.

8. **Discharge temperature:** Complete this section only if your facility is a steam electric power generator, dairy, pulp/paper mill, or has a cooling water discharge (SIC code 9999) and the discharge temperature of this outfall exceeds the temperature of the receiving water by more than three (3) degrees Fahrenheit at any time. Assume a temperature of 60°F for groundwater discharges. If thermal data is unavailable, use your best estimates. Provide a description of the discharge configuration, such as "Discharge via effluent diffuser to subsurface of Hudson River." Submit specifics on the intake and discharge configuration in plan and profile (including location, design, operation, construction, and/or capacity) and indicate the disposition of any screened materials if either of the following is applicable to your facility:

- a. The discharge is to a Lake, Impoundment, or Coastal Water, and the flow is greater than 5 MGD; or
- b. The discharge is to a River, Stream, or Estuary, and the flow of the discharge is greater than the MA7CD10 of the receiving water.

MA7CD10 flow data for the receiving water may be obtained from the NYSDEC Bureau of Watershed Management, Quality Allocation Section, 4th Floor, 625 Broadway, Albany NY 12233-3508, telephone (518) 402-8250.

9. **Water treatment chemicals:** Indicate if the water or wastewater is treated with any additives prior to discharge. These additives include, but are not limited to, conditioners, corrosion or scale inhibitors, flocculants, biocides, fungicides, molluscides, and sequestrants. If no additives are used to treat the water or wastewater from this outfall prior to discharge, check the "No" box and go to Item 10. For each water treatment additive used, provide the product name and manufacturer of the additive, and complete attached Form WTCFX, "Water Treatment Chemical (WTC) Usage Notification Requirements for SPDES Permittees."
10. **Biological testing:** Indicate whether any biological test for acute or chronic toxicity has been made on the discharge from this outfall, or on the receiving water in relation to the discharge from this outfall, in the past 3 years. Describe the type of testing performed in this table. Do not submit any information previously submitted as part of a toxicity testing program required by this Department, or otherwise submitted to the Division of Water. Indicate the date of submittal of any biological testing results previously submitted to the Department.
11. **Treatment:** Provide the requested information for the treatment system(s), if any, that are used to treat the effluent from this outfall. Include the applicable treatment code(s) from Table 4 on the following page for each treatment process. The design flow rate should be based on the treatment system design capacity, with units (e.g. GPD, etc.).
12. **Facility Improvements:** Indicate whether your facility has either a compliance agreement with a regulating agency or planned production changes which will materially alter the quantity and/or quality of the discharge from this outfall. Compliance agreements include, but are not limited to, agreements with any Federal, State, or local authority to meet an implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices, or for any other environmental programs, via permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and/or grant or loan conditions. Planned production changes include, but are not limited to, increases or decreases in production due to demand, plant consolidation or shutdown, and/or change in plant processes which will result in an increase or decrease in the quantity or nature of wastewater discharged. For existing permits, attach plans for any treatment system or other physical changes in the discharge process which will change the nature of the discharge from this outfall as an addendum to this application.

**This concludes the information required for Section II. Instructions for Section III, which requests outfall specific sampling information, begin on Page 11 following Table 4.**



**TABLE 4**  
**TREATMENT CODES AND PROCESSES**

**1. PHYSICAL TREATMENT PROCESSES**

1-A	Ammonia Stripping	1-N	Microstraining
1-B	Dialysis	1-O	Mixing
1-C	Diatomaceous Earth Filtration	1-P	Moving Bed Filters
1-D	Distillation	1-Q	Multimedia Filtration
1-E	Electrodialysis	1-R	Rapid Sand Filtration
1-F	Evaporation	1-S	Reverse Osmosis (Hyperfiltration)
1-G	Flocculation	1-T	Screening
1-H	Flotation	1-U	Sedimentation (Skimming)
1-I	Foam Fractionation	1-V	Slow Sand Filtration
1-J	Freezing	1-W	Solvent Extraction
1-K	Gas-Phase Separation	1-X	Sorption
1-L	Grinding (Comminutors)	1-Y	Air Stripping
1-M	Grit Removal	1-Z	Steam Stripping

**2. CHEMICAL TREATMENT PROCESSES**

2-A	Carbon Adsorption	2-H	Disinfection (Other)
2-B	Chemical Oxidation	2-I	Electrochemical Treatment
2-C	Chemical Precipitation	2-J	Ion Exchange
2-D	Coagulation	2-K	Neutralization
2-E	Dechlorination	2-L	Reduction
2-F	Disinfection (Chlorine)	2-M	Oxidation (UV)
2-G	Disinfection (Ozone)	2-N	Thermal Destruction

**3. BIOLOGICAL TREATMENT PROCESSES**

3-A	Activated Sludge	3-F	Spray Irrigation./Land Application
3-B	Aerated Lagoons	3-G	Stabilization Ponds
3-C	Anaerobic Treatment	3-H	Trickling Filtration
3-D	Nitrification-Denitrification	3-I	Rotating Biological Contactor (RBC)
3-E	Preaeration		

**4. POLLUTION PREVENTION MEASURES AND OTHER PROCESSES**

4-A	Inspection, Maintenance & Repair	4-E	Product Substitution
4-B	Sensor/Controller	4-F	Discharge to Surface Water
4-C	Reuse/Recycle of Treated Effluent	4-G	Ocean Discharge Through Outfall
4-D	Underground Injection		

**5. SLUDGE TREATMENT AND DISPOSAL PROCESSES**

5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Wet Oxidation
5-L	Gravity Thickening		

**6. OTHER PROCESSES NOT LISTED ABOVE**

6-A Unlisted Process (Describe)

**State Pollutant Discharge Elimination System (SPDES)  
INDUSTRIAL APPLICATION FORM NY-2C  
For New Permits and Permit Modifications  
APPLICATION INSTRUCTIONS**

### **SECTION III - SAMPLING AND REPORTING INFORMATION**

Make copies of the blank forms for this section and complete this section for each outfall. Base your answers on actual data whenever available; otherwise use your best estimate. Be sure to enter the facility name, outfall number, and SPDES number (if applicable) at the top of each page. Applicants applying for modification of existing permits should complete all information in this section, whether or not changes have occurred to a wastewater discharge stream or its associated processes.

#### **1. Sampling Information - Conventional Pollutants:**

##### **A. Definitions:**

**i. Grab sample:** An individual sample of at least 100 milliliters (ml) collected at a randomly selected time over a period not exceeding 15 minutes.

**ii. Composite sample:** A combination of at least 8 sample aliquots of at least 100 ml total volume, collected at periodic intervals during the discharging hours of a facility over a finite (generally 24 hour) period. The composite must be flow proportional; either the time interval between each aliquot or the volume of each aliquot must be proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically.

**B. General Requirements:** Report all data on the Sampling Information - Conventional Parameters table (Section III Forms, Item 1), indicating the units and the sample types as specified below. Actual data must be provided for existing discharges, and expected or estimated data provided for proposed discharges. The unit are as follows: µg/l = micrograms per liter; mg/l = milligrams per liter; °F = degrees Fahrenheit; °C = degrees Celsius. Monthly and long term average data should be based on the actual operating hours of the facility and the duration of the discharge, where applicable. For long term average data, use the equivalent of three years of monthly sampling, or the maximum amount of data available for the production process as it exists at the time of application.

This item requires all dischargers to sample for pollutants a. through i. listed in the Sampling Information - Conventional Parameters table, but allows the possibility of a waiver from this requirement. The outfall categories specified in Table 5 below have received waivers for the pollutants listed. If an outfall category or pollutants are not specified in Table 5, you may request waivers on a case by case basis.

**TABLE 5  
CONVENTIONAL POLLUTANT SAMPLING WAIVERS FOR SPECIFIC DISCHARGE CATEGORIES**

<b>Category</b>	<b>Pollutant Waiver</b>
Noncontact cooling waters without the admixture of other wastes (food and paper products manufacturers)	COD & Ammonia (as N)
Noncontact cooling waters without the admixture of other wastes and without the use of water treatment chemicals	BOD & COD
Discharges to groundwater	Temperature (winter), Temperature (summer)
Cement Plants, Salt Companies, Petroleum Storage Facilities (but not refineries), Potable or Process Water Treatment Plants	BOD, COD, & Ammonia (as N)
Sewage without the admixture of industrial or other wastes	COD
Stormwater (food and paper products manufacturers)	COD, Ammonia (as N), Temperature (winter), Temperature (summer)
Stormwater (all other wastes)	BOD, COD, Temperature (winter), Temperature (summer)

Grab samples shall be used to analyze for pH, temperature, total phosphorus, total residual chlorine, oil and grease, and fecal coliform unless other frequency-sample type analyses are available. 24-hour composite samples shall be used to analyze for 5-day BOD, COD, TOC, ammonia nitrogen and total suspended solids unless other frequency-sample type analyses are available. For existing discharges, sampling data from the previous 12 months that are considered representative of your current discharge may be used for completing this section.

**B. General Requirements: (ctd)**

For two or more substantially identical outfalls, permission may be requested from the Regional Water Engineer to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the Regional Water Engineer, identify which outfall was sampled and describe, on a separate sheet attached to the application form, why the outfalls which were not sampled are substantially identical to the outfall which was sampled.

**C. Reporting of intake data:** Applicants are not required to report intake water data unless they are attempting to demonstrate eligibility for "net" effluent limitations for one or more pollutants. A "net" effluent limitation is determined by subtracting the average level of the pollutant(s) present in the intake waters from the levels remaining in the effluent after treatment. SPDES regulations allow net limitations only in certain circumstances (see 40 CFR Part 122.45(9)). To demonstrate eligibility, report the average concentration and/or mass of the results of the analyses on the intake water. If the intake water is treated prior to use, report the intake concentrations and/or mass after treatment. In addition to the analytical results, the following information must be submitted for each parameter:

- i) A statement of the extent to which the level of the pollutant in the intake water is reduced by treatment of the wastewater. Be sure to specify the type and capacity of any intake water treatment equipment (e.g. screening, filtration, etc.) in the table in Section II Forms, Item 10.
- ii) When applicable (for example, when the pollutant represents a class of compounds, e.g., BOD<sub>5</sub>, TSS, etc.), a demonstration of the extent to which the pollutants in the intake vary physically, chemically and biologically from the pollutants contained in the discharge.

**2. Sampling Information - Priority Pollutants, Toxic Pollutants, and Hazardous Substances:**

**A. General Requirements:**

**i. New discharges:** Report all data on the Projected Effluent Quality Table (Section III Forms, Item 3), indicating units and sample types. Base your answers on actual data whenever available; otherwise use your best estimate. For new facilities to be built, use proposed design and production estimates. Indicate the units as follows: µg/l = micrograms per liter; mg/l = milligrams per liter; °F = degrees Fahrenheit; °C = degrees Celsius. See Item 1.A. above for definitions of grab and composite sampling. Monthly and long term average data should be based on the actual operating hours of the facility and the duration of the discharge, where applicable and available.

**ii. Existing discharges:** Report the monitoring results from this outfall for the past three (3) years, or for the time period representative of the current discharge from this outfall if less than three years. Include sample date, reported concentration, flow, and units for each parameter monitored from this outfall. It is not necessary to include data that has previously been submitted on Discharge Monitoring Reports (DMRs). Indicate the units as follows: µg/l = micrograms per liter; mg/l = milligrams per liter; °F = degrees Fahrenheit; °C = degrees Celsius. Provide the monitoring results on a CD-ROM (or other secure, read-only personal computer media) in Windows-compatible spreadsheet format. Use the data format as shown on the Existing Effluent Quality table (Section III Forms, Item 4). You may alternatively report all data in hardcopy format using the Existing Effluent Quality table or other table of similar format, indicating units and sample types, if you do not have access to the computer media listed above.

**iii. All discharges:** Grab samples shall be used to analyze for total phenols and cyanide unless other frequency-sample type analyses are available. 24-hour composite samples shall be used to analyze for all other parameters unless other frequency-sample type analyses are available. For existing discharges, sampling data from the previous 12 months that are considered representative of your current discharge should be used for completing this section. If your facility discharges any of the parameters identified in Tables 6 - 10 as Bioaccumulative Chemicals of Concern (BCCs), complete the information requested on Application Supplement A, "BCC ANTIDEGRADATION DEMONSTRATION," and attach the form to this application.

If sampling data are available for other parameters not listed in Tables 6 - 10 or in other parts of this application, the applicant should report the sampling data for this outfall in the table after all other required data, or attach the information to this application on 8 ½ x 11 paper.

For two or more substantially identical outfalls, permission may be requested from the Regional Water Engineer to sample and analyze only one outfall and submit the results of the analysis for other substantially identical outfalls. If the request is granted by the Regional Water Engineer, identify which outfall was sampled and describe, on a separate sheet attached to the application form, why the outfalls that were not sampled are substantially identical to the outfall which was sampled.

**iii. All discharges:(ctd)** All surface water discharge applicants who use or manufacture 2,4,5 trichlorophenoxy acetic acid (2,4,5-T); 2(2,4,5-trichlorophenoxy) propanoic acid (Silvex, 2,4,5,TP); 2-(2,4,5-trichlorophenoxy)ethyl 2,2-dichloropropionate (Erbon); 0,0-Dimethyl 0-(2,4,5Trichlorophenyl) Phosphorothioate (Ronnel); 2,4,5-trichlorophenol (TCP); or Hexachlorophene (HCP); or knows or has reason to believe that TCDD is or may be present in their discharge must report qualitative data, generated using a screening procedure not calibrated with analytical standards, for 2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD). All data must be generated using standard calibration procedures.

**B. Primary Industries:** Complete this item only if the facility is a primary industry as indicated in Section I Forms, Item 12. If it is not a primary industry continue with Section C. below.

**i. Process Wastewater:** If the discharge from this outfall contains any process wastewater, check the YES box and continue with item ii. below. If the discharge from this outfall does not contain any process wastewater, check NO and continue with item C.

**ii. Sampling Data:** Indicate which GC/MS (Gas Chromatograph/Mass Spectroscopy) fraction(s) must be tested for. Refer to Table 1 of the instructions for a list of industrial categories and the respective GC/MS testing requirements. Check all that apply. Provide analytical data for each parameter of the GC/MS fraction checked above. Metals sampling, using the most sensitive approved method (i.e. graphite furnace atomic absorption (GFAA) or other equally sensitive method), is required for all industrial categories listed in Table 1 of the instructions. Refer to Tables 6 and 7 on the following pages for the parameters in each GC/MS fraction. Provide copies of the analytical results or record the information as directed in items 2.A.i. and ii. above. Additionally, all primary industries that discharge process wastewater must provide quantitative data on the appropriate Effluent Quality table for the parameters indicated, based on actual or projected flow rates as listed in Section II Item 4. above. Permittees are not required to analyze for 2,3,7,8-TCDD (Dioxin) unless they believe it is present in the discharge.

**C. Additional Information: All applicants must complete this section.**

**i. Required pollutant analyses:** If you know or have reason to believe that any of the pollutants listed in Tables 6, 7 and 8 are present in the discharge from this outfall, check "Yes" and provide qualitative and quantitative data as directed in items 2.A.i. and ii. above. Both concentration and mass data must be provided for these pollutants. If you do not know or have reason to believe any of the pollutants in Tables 6, 7, or 8 are present in the discharge, check "No".

**ii. Other pollutants:** If you know or have reason to believe that any of the pollutants listed in Table 9 are present in the discharge from this outfall, regardless of the type of discharge, check "Yes" and describe reasons for the pollutant being present and provide available quantitative data as an attachment to this application. If you know or have reason to believe that any of the pollutants listed in Table 10, or any other toxic, harmful, or injurious chemical substances not listed in Tables 6-10, are present in the discharge from this outfall, regardless of the type of discharge, check "Yes," describe reasons the pollutant is believed to be present, and estimate the concentration expected in the discharge. If you do not know or have reason to believe any of the pollutants in Tables 9 or 10 are present in the discharge, check "No".

### 3. Reporting Information: Discharge Monitoring Report (DMR) Authorization

The DMRs for your facility must be signed as follows:

- A. For *corporations*, by a responsible corporate official. For purposes of this section, a responsible corporate official means (i) a president, secretary, treasurer, or a vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making function for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- B. For a *partnership* or *sole proprietorship*: by a general partner or the proprietor, respectively.
- C. For a *municipality, state, federal, or other public agency*: by either a principal or executive officer or ranking elected official. A principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.
- D. A duly authorized representative of the person described in items (A), (B) or (C). A person is a duly authorized representative only if (i) the authorization is made in writing by a person described in paragraph (A), (B) or (C); (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company, and (iii) the written authorization is submitted to the Department.

**Changes to authorization:** If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements above must be submitted to the Department in letter format prior to or together with any reports to be signed by an authorized representative.

**This completes the instructions for Industrial Application Form NY-2C.**

**TABLE 6**  
**PRIORITY POLLUTANTS (From: 40CFR Part 122, Appendix D)**

Include monitoring results for any of the pollutants listed below that are believed present in the discharge from any outfall at your facility.

<b>GC/MS Volatile fraction compounds:</b>		<b>GC/MS Base/Neutral fraction compounds</b>		<b>GC/MS Pesticides fraction compounds:</b>	
CAS #	Pollutant Name	CAS #	Pollutant Name	CAS #	Pollutant Name
00107-02-8	Acrolein <sup>1</sup>	00083-32-9	Acenaphthene	00309-00-2	Aldrin <sup>1</sup>
00107-13-1	Acrylonitrile <sup>1</sup>	00208-96-8	Acenaphthylene	00319-84-6	alpha-BHC <sup>1</sup>
00071-43-2	Benzene	00120-12-7	Anthracene <sup>1</sup>	00319-85-7	beta-BHC <sup>1</sup>
00075-25-2	Bromoform	00092-87-5	Benzidine	00058-89-9	gamma-BHC (Lindane) <sup>1</sup>
00056-23-5	Carbon Tetrachloride	00056-55-3	Benz(a)anthracene <sup>1</sup>	00319-86-8	delta-BHC <sup>1</sup>
00108-90-7	Chlorobenzene	00050-32-8	Benzo(a)pyrene <sup>1</sup>	00057-74-9	Chlordane <sup>1</sup>
00124-48-1	Chlorodibromomethane	00205-99-4	3,4-Benzofluoranthene <sup>1</sup>	00050-29-3	4,4'-DDT <sup>1</sup>
00075-00-3	Chloroethane	00191-24-2	Benzo(ghi)perylene <sup>1</sup>	00072-55-9	4,4'-DDE <sup>1</sup>
00110-75-8	2-Chloroethylvinyl ether	00207-08-9	Benzo(k)fluoranthene	00072-54-8	4,4'-DDD <sup>1</sup>
00067-66-3	Chloroform	00111-91-1	Bis(2-chloroethoxy)methane	00060-57-1	Dieldrin <sup>1</sup>
00075-27-4	Dichlorobromomethane	00111-44-4	Bis(2-chloroethyl)ether	00959-98-8	alpha-Endosulfan <sup>1</sup>
00075-34-3	1,1-Dichloroethane	00102-60-1	Bis(2-chloroisopropyl)ether	33213-65-9	beta-Endosulfan
00107-06-2	1,2-Dichloroethane	00117-81-7	Bis(2-ethylhexyl)phthalate	01031-07-8	Endosulfan sulfate
00075-35-4	1,1-Dichloroethylene	00101-55-3	4-Bromophenyl phenyl ether <sup>1</sup>	00072-20-8	Endrin <sup>1</sup>
00078-87-5	1,2-Dichloropropane	00085-68-7	Butylbenzyl phthalate	07421-93-4	Endrin aldehyde
00542-75-6	1,3-Dichloropropylene	00091-58-7	2-Chloronaphthalene	00076-44-8	Heptachlor <sup>1</sup>
00100-41-4	Ethylbenzene	07005-72-3	4-Chlorophenyl phenyl ether <sup>1</sup>	01024-57-3	Heptachlor epoxide <sup>1</sup>
00074-83-9	Methyl Bromide <sup>1</sup>	00218-01-9	Chrysene <sup>1</sup>	53469-21-9	PCB-1242 <sup>1</sup>
00074-87-3	Methyl Chloride	00053-70-3	Dibenz(a,h)anthracene <sup>1</sup>	11097-69-1	PCB-1254 <sup>1</sup>
00075-09-2	Methylene Chloride	00095-50-1	1,2-Dichlorobenzene	11104-28-2	PCB-1221 <sup>1</sup>
00079-34-5	1,1,2,2-Tetrachloroethane	00541-73-1	1,3-Dichlorobenzene	11141-16-5	PCB-1232 <sup>1</sup>
00127-18-4	Tetrachloroethylene	00106-46-7	1,4-Dichlorobenzene	12672-29-6	PCB-1248 <sup>1</sup>
00108-88-3	Toluene	00091-94-1	3,3'-Dichlorobenzidine	11096-82-5	PCB-1260 <sup>1</sup>
00156-60-5	1,2-trans-Dichloroethylene	00084-66-2	Diethyl phthalate	12674-11-2	PCB-1016 <sup>1</sup>
00071-55-6	1,1,1-Trichloroethane	00131-11-3	Dimethyl phthalate	08001-35-2	Toxaphene <sup>1</sup>
00079-00-5	1,1,2-Trichloroethane	00084-74-2	Di-n-butyl phthalate	<b>Dioxin:</b>	
00079-01-6	Trichloroethene	00606-20-2	2,6-Dinitrotoluene	01764-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin <sup>1,2</sup>
00075-01-4	Vinyl Chloride	00117-84-0	Di-n-octyl phthalate	<b>Metals and Other Toxic Pollutants:</b>	
<b>GC/MS Acid Fraction Compounds:</b>		00122-66-7	1,2-Diphenylhydrazine <sup>1</sup>	CAS #	Pollutant Name
CAS #	Pollutant Name	00206-44-0	Fluoranthene <sup>1</sup>	07440-36-0	Antimony, Total
00095-57-8	2-Chlorophenol	00086-73-7	Fluorene	07440-38-2	Arsenic, Total
00120-83-2	2,4-Dichlorophenol	00118-74-1	Hexachlorobenzene <sup>1</sup>	07440-41-7	Beryllium, Total
00105-69-7	2,4-Dimethylphenol	00087-68-3	Hexachlorobutadiene <sup>1</sup>	07440-43-9	Cadmium Total
00534-52-1	4,6-Dinitro-o-cresol <sup>1</sup>	00077-47-4	Hexachlorocyclopentadiene	07440-47-3	Chromium, Total
00051-28-5	2,4-Dinitrophenol	00067-72-1	Hexachloroethane <sup>1</sup>	07440-50-8	Copper, Total
00088-75-5	2-Nitrophenol	00193-39-5	Indeno(1,2,3-cd)pyrene <sup>1</sup>	07439-92-1	Lead, Total
00100-02-7	4-Nitrophenol	00078-59-1	Isophorone	07439-97-6	Mercury, Total <sup>1</sup>
00059-50-7	p-Chloro-m-cresol <sup>1</sup>	00091-20-3	Naphthalene	07440-02-0	Nickel, Total
00087-86-5	Pentachlorophenol <sup>1</sup>	00098-95-3	Nitrobenzene	07782-49-2	Selenium, Total
00108-95-2	Phenol	00621-64-7	N-nitrosodi-n-propylamine	07440-22-4	Silver, Total
00088-06-2	2,4,6-Trichlorophenol	00086-30-6	N-nitrosodiphenylamine	07440-28-0	Thallium, Total <sup>1</sup>
		00085-01-8	Phenanthrene <sup>1</sup>	07440-66-6	Zinc, Total
		00129-00-0	Pyrene <sup>1</sup>	00057-12-5	Cyanide, Total
		00120-82-1	1,2,4-Trichlorobenzene <sup>1</sup>		Phenols, Total <sup>3</sup>
				01332-21-4	Asbestos

- Notes: 1. These pollutants either have FDA fish flesh concentration limits, are identified as Bioaccumulative Chemicals of Concern (BCCs), or are restricted pesticides. Any quantity of these chemicals used, produced, stored, distributed or otherwise disposed of by your facility must be reported on the ICS Form. See Item 19 on page 6 of these instructions for more information.
2. Dioxin is not listed in Part 122, Appendix D, but is a priority pollutant.
3. Phenols, Total is not a Priority Pollutant but is considered a Toxic Substance for permit classification purposes.

**State Pollutant Discharge Elimination System (SPDES)**  
**INDUSTRIAL APPLICATION FORM NY-2C**  
**For New Permits and Permit Modifications to Discharge Industrial Wastewater and Storm Water**  
**Section I - Permittee and Facility Information**  
Please type or print the requested information.

**1. Current Permit Information** (leave blank if for new discharge)

SPDES Number:	DEC Number:
---------------	-------------

**2. Permit Action Requested:** (Check applicable box)

<input type="checkbox"/> A NEW proposed discharge	<input type="checkbox"/> An EBPS INFORMATION REQUEST response	<input type="checkbox"/> A RENEWAL of an existing SPDES permit
<input type="checkbox"/> A MODIFICATION of the existing permit	<input checked="" type="checkbox"/> An EXISTING discharge currently without permit	

Does this request include an increase in the quantity of water discharged from your facility to the waters of the State?

☐ YES - Describe the increase:

☒ NO - Go to Item 3. below.

**3. Permittee Name and Address**

Name	GMD SHIPYARD CORP.	Attention	ALEXANDER GOMEZ
Street Address	Bldg. 595, Brooklyn Navy Yard, 63 Flushing Avenue		
City or Village	Brooklyn	State	NY
		ZIP Code	11205

**4. Facility Name, Address and Location**

Name	GMD SHIPYARD		
Street Address	Bldg. 595, Brooklyn Navy Yard, 63 Flushing Avenue		P.O. Box
City or Village	Brooklyn	State	NY
		ZIP Code	11205
Town		County	
Telephone	(718) 260-9200	FAX	(718) 260-9298
		NYTM - E	40 - 42'
		NYTM - N	73 - 58'
Tax Map Info (New York City, Nassau County and Suffolk County only)			
Section	Kings County	Block	2023
		Subblock	-
		Lot	1

**5. Facility Contact Person**

Name	Alexander Gomez	Title	President
Street Address	Bldg. 595, Brooklyn Navy Yard, 63 Flushing Avenue		P.O. Box
City or Village	Brooklyn	State	NY
		ZIP Code	11205
Telephone	(718) 260-9200	FAX	(718) 260- 9298
		E-Mail or Internet	agomez@gmdshipyard.com

**6. Discharge Monitoring Report (DMR) Mailing Address**

Mailing Name	GMD SHIPYARD		
Street Address	Bldg. 595, Brooklyn Navy Yard, 63 Flushing Ave.		P.O. Box
City or Village	Brooklyn	State	NY
		ZIP Code	11205
Telephone	(718) 260-9200	FAX	(718) 260-9298
		E-Mail or Internet	agomez@gmdshipyard.com
Name and Title of person responsible for signing DMRs	Alexander Gomez		
	Signature		

**INDUSTRIAL APPLICATION FORM NY-2C**  
**Section I - Permittee and Facility Information**Facility Name: **GMD SHIPYARD**

SPDES Number:

**7. Summarize the outfalls present at the facility:**

Outfall Number	Receiving Water	Type of discharge
001	Wallabout Bay, East River	Graving Dock No. 1 Main Pump
002	Wallabout Bay, East River	Graving Dock No. 1 Drainage Pump
003	Wallabout Bay, East River	Storm Water Discharge (Berth 7)
004	Wallabout Bay, East River	Storm Water Discharge (Berth 8)
005	Wallabout Bay, East River	Graving Dock No. 5 Drainage Pump
006	Wallabout Bay, East River	Graving Dock No. 5 Main Pump
007	Wallabout Bay, East River	Graving Dock No. 6 Drainage Pump
008	Wallabout Bay, East River	Storm Water Discharge (Berth 9)
009	Wallabout Bay, East River	Storm Water Discharge (Berth 10)
010	Wallabout Bay, East River	Graving Dock No. 6 Main Pump

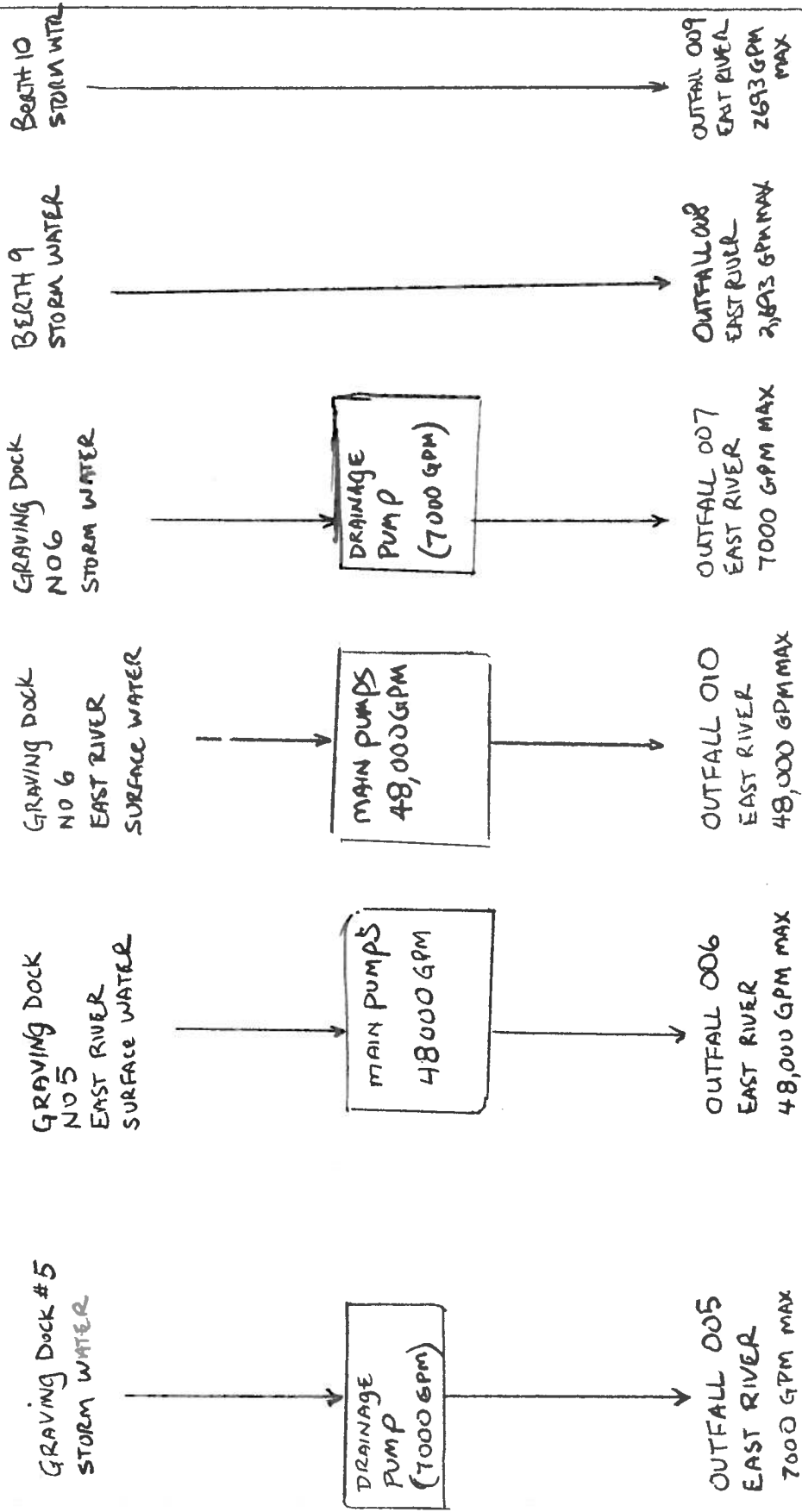
**8. Map of Facility and Discharge Locations:**

Provide a detailed map showing the location of the facility, all buildings or structures present, wastewater discharge systems, outfall locations into receiving waters, nearby surface water bodies, water supply wells, and groundwater monitoring wells, and attach it to this application. Also submit proof, either by indication on the map or other documentation, that a right of way for the discharges exists from the facility property to a public right of way.

**9. Water Flow Diagram:**

Please See Attached  
Diagram

# 9. WATER FLOW DIAGRAM





# 9. WATER FLOW DIAGRAMS

GRAVING DOCK NO. 1  
EAST RIVER  
SURFACE WATER

MAIN PUMP  
14,000 GPM

OUTFALL 001  
EAST RIVER  
14,000 GPM MAX.

GRAVING DOCK NO. 1  
STORM WATER

DRAINAGE PUMP  
3000 GPM

OUTFALL 002  
EAST RIVER  
3000 GPM MAX

BERTH 7  
CATCHMENT AREA  
STORM WATER

OUTFALL 003  
EAST RIVER  
1,167 gpm MAX

BERTH 8 CATCHMENT AREA  
STORM WATER

OUTFALL 004  
EAST RIVER  
2693 GPM MAX

# **INDUSTRIAL APPLICATION FORM NY-2C** **Section I - Permittee and Facility Information**

Facility Name: **GMD SHIPYARD**

SPDES Number:

**10. Nature of business:** (Describe the activities at the facility and the date(s) that operation(s) at the facility commenced)

GMD Shipyard operates a ship repair facility at Graving Dock No.'s 1, 3, 5 & 6, Brooklyn Navy Yard. Brooklyn, New York. Ship repair services include structural inspection and repair, engine and mechanical system repairs, and surface coating operations. These activities occur in active Graving Dock 1, 5 and 6. Graving Dock No. 3 is used solely as a 'wet berth' (no pump discharges).

**11. List the 4-digit SIC codes which describe your facility in order of priority:**

Priority 1 3   7   3   1	Description: Ship Repair	Priority 3 	Description:
Priority 2 	Description:	Priority 4 	Description:

**12. Is your facility a primary industry as listed in Table 1 of the instructions?**
☐ YES - Complete the following table.

☒ NO - Go to Item 13. below.

Industrial Category	40 CFR		Industrial Category	40 CFR	
	Part	Subpart		Part	Subpart

**13. Does this facility manufacture, handle, or discharge recombinant-DNA, pathogens, or other potentially infectious or dangerous organisms?**
☐ YES - Attach a detailed explanation to this application.

☒ NO - Go to Item 14 below.
**14. Is storm runoff or leachate from a material storage area discharged by your facility?**
☐ YES - Complete the following table, and show the location of the stockpile(s) and discharge point(s) on the diagram in Item 9.

☒ NO - Go to Item 15 on the following page.

Size of area	Type(s) of material stored	Quantity of material stored	Runoff control devices

# **INDUSTRIAL APPLICATION FORM NY-2C** **Section I - Permittee and Facility Information**

Facility Name:

GMD SHIPYARD

SPDES Number:

**15. Facility Ownership:** (Place an "X" in the appropriate box)

Corporate

☒

Sole Proprietorship

☐

Partnership

☐

Municipal

☐

State

☐

Federal

☐

Other

☐

Are any of the discharges applied for in this application on Indian lands?

Yes

☐

No

☐**16. List information on any other environmental permits for this facility:**

Issuing Agency	Permit Type	Permit Number	Permit Status		
			Active	Applied for	Inactive
NYSDEC	Air Permit	2-6101-00369/00001	XX		

**17. Laboratory Certification:**

Were any of the analyses reported in Section III of this application performed by a contract laboratory or a consulting firm?

☒

YES - Complete the following table.

☐ NO - Go to Item 18 below.

Name of laboratory or consulting firm	Address	Telephone (area code and number)	Pollutants analyzed
Environmental Testing Laboratories	208 Rte. 109, Farmingdale NY 11735	(631) 249-8344	Volatiles, Semivolatiles, PCB, Metals, General Chemistry Parameters

**18. Certification**

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Name and official title (type or print)

Alexander Gomez

Date signed

Signature

Telephone number

FAX number

(718) 260-9200

(718) 260-9298

Facility Name: **GMD SHIPYARD**

Complete all information for those substances your facility has used, produced, stored, distributed, or otherwise disposed of in the past five (5) years at or above the threshold values listed in the instructions. Include substances manufactured at your facility, as well as any substances that you have reason to know or believe present in materials used or manufactured at your facility. Do not include chemicals used only in analytical laboratory work, or small quantities of routine household cleaning chemicals. Enter the name and CAS number for each of the chemicals listed in Tables 6-10 of the instructions, and the table number which lists the chemical. You may use ranges (e.g. 10-100 lbs., 100-1000 lbs., 1000-10000 lbs., etc.) to describe the quantities used on an annual basis as well as for the amount presently on hand. For those chemicals listed in Tables 6, 7, or 8 which are indicated as being potentially present in the discharge from one or more outfalls at the facility, indicate which outfalls may be affected in the appropriate column below, and include sampling results in Section III of this application for each of the potentially affected outfalls. Make additional copies of this sheet if necessary.

[illegible]

**This completes Section I of the SPDES Industrial Application Form NY-2C. Section II, which requires specific information for each of the outfalls at your facility, and Section III, which requires sampling information for each of the outfalls at your facility, must also be completed and submitted with this application.**

State Pollutant Discharge Elimination System (SPDES)  
**INDUSTRIAL APPLICATION FORM NY-2C**  
 For New Permits and Permit Modifications to Discharge Industrial Wastewater and Storm Water  
**Section II - Outfall Information**  
 Please type or print the requested information.

Facility Name: <b>GMD SHIPYARD</b>	SPDES Number:
---------------------------------------	---------------

**1. Outfall Number and Location**

Outfall No.: <b>006</b>		
Latitude <b>N40° 42 ' 172"</b>	Longitude <b>W73° 58 ' 321"</b>	Receiving Water <b>Wallabout Bay, East River</b>

**2. Type of Discharge and Discharge Rate** (List all information applicable to this outfall)

	Volume/Flow	Units				Volume/Flow	Units		
		MGD	GPM	Other (specify)			MGD	GPM	Other (specify)
a. Process Wastewater					f. Noncontact Cooling Water				
b. Process Wastewater					g. Remediation System Discharge				
c. Process Wastewater					h. Boiler Blowdown				
d. Process Wastewater					i. Storm Water				
e. Contact Cooling Water					j. Sanitary Wastewater				
k. Other discharge (specify): <b>Graving Dock No. 5 Main Pump</b>	<b>48000</b>						<b>x</b>		
l. Other discharge (specify):									

**3. List process information for the Process Wastewater streams identified in 2.a-d above:**

a. Name of the process contributing to the discharge <b>Ship Repair</b>				Process SIC code: <b>3   7   3   1</b>
Describe the contributing process <b>The drainage pump evacuates Graving Dock water from the Graving Dock during ship repair activities</b>	Category	Quantity per day <b>NA</b>	Units of measure	
	Subcategory			
b. Name of the process contributing to the discharge			Process SIC code: 	
Describe the contributing process	Category	Quantity per day	Units of measure	
	Subcategory			
c. Name of the process contributing to the discharge			Process SIC code: 	
Describe the contributing process	Category	Quantity per day	Units of measure	
	Subcategory			
d. Name of the process contributing to the discharge			Process SIC code: 	
Describe the contributing process	Category	Quantity per day	Units of measure	
	Subcategory			

**4. Expected or Proposed Discharge Flow Rates for this outfall:**

a. Total Annual Discharge <b>NA</b>	b. Daily Minimum Flow <b>MG</b>	c. Daily Average Flow <b>NA</b>	d. Daily Maximum Flow <b>MGD</b>	e. Maximum Design flow rate <b>69.1</b>
	<b>MGD</b>	<b>MGD</b>	<b>MGD</b>	<b>MGD</b>

# **INDUSTRIAL APPLICATION FORM NY-2C** **Section II - Outfall Information**

**Outfall No.:** 001

**Facility Name:** GMD SHIPYARD

**SPDES Number:**

## **5. Is this a seasonal discharge?**

☐ **YES** - Complete the following table.

☒ **NO** - Go to Item 6 below.

Operations contributing flow (list)	Discharge frequency				Flow		
	Batches per year	Duration per batch	Flow rate per day		Total volume per discharge	Units	Duration (Days)
			LTA	Daily Max			

## **6. Water Supply Source** (Indicate all that apply)

	Name or owner of water supply source	Volume or flow rate	Units (check one)		
Municipal Supply			MGD	GPD	GPM
Private Surface Water Source			MGD	GPD	GPM
Private Supply Well			MGD	GPD	GPM
Other (specify)	Surface Water (East River)	NA	MGD	GPD	GPM

## **7. Outfall configuration:** (Surface water discharges only)

### **A. Where is the discharge point located with respect to the receiving water?**

In the streambank: ☐

In the stream: ☐

Within a lake or ponded water: ☐

Within an estuary: ☒

Attach Supplement C, MIXING ZONE REQUIREMENTS FOR DISCHARGES TO ESTUARIES.

Discharge is equipped with diffuser: ☐

Attach description, including configuration and plan drawing of diffuser, if used.

### **B. If located in a stream, approximately what percentage of stream width from shore is the discharge point located?**

10% ☐ 25% ☐ 50% ☐ Other:

### **C. If located in a stream, describe the stream geometry in the general vicinity of the discharge point, under low flow conditions:**

Stream width	Stream depth	Stream velocity	Are the results of a mixing/diffusion study attached?	<input type="checkbox"/> YES
Feet	Feet	Feet/Sec		<input type="checkbox"/> NO

## Section II - Outfall Information

Outfall No.:

001

Facility Name:

GMD SHIPYARD

SPDES Number:

**8. Thermal Discharge Criteria**

Is your facility one of the applicable types of facilities listed in the instructions, and does the temperature of this discharge exceed the receiving water temperature by greater than three (3) degrees Fahrenheit?

☐ YES - Complete the following table.

☐ Information on the intake and discharge configuration of this outfall is attached.

☒ NO - Go to Item 9. below.

Discharge Temperature, deg. F			Duration of maximum discharge temperature		Dates of maximum discharge temperature		Maximum flow rate	Discharge configuration (e.g. subsurface, surface, effluent diffuser, diffusion well, etc.)
Average change in temperature (delta T)	Maximum change in temperature (delta T)	Maximum temperature	hours per day	days per year	From	To	MGD	

**9. Are any water treatment chemicals or additives that are used by your facility subsequently discharged through this outfall?**
☐ YES - Complete the following table and complete pages 1 of 3 and 2 of 3 of Form WTCFX for each water treatment chemical listed.

☒ NO - Go to Item 10. below.

Manufacturer	WTC trade name	Manufacturer	WTC trade name

**10. Has any biological test for acute or chronic toxicity been performed on this outfall or on the receiving water in relation to this outfall in the past three (3) years?**
☐ YES - Complete the following table.

☒ NO - Go to Item 11. on the following page.

Water tested	Purpose of test	Type of test	Chronic or Acute?	Subject species	Testing date(s)		Submitted? (Date)
					Start	Finish	

**Outfall No.:** 001

SPDES Number:

**GMD SHIPYARD**

**YES** - Complete the following table. Treatment codes are listed in Table 4.

☒ **NO** - Go to Item 12 below.

[illegible]

**YES** - Complete the following table.

**X NO - Go to Section III on the following page.**

Description of project	Subject to Condition or Agreement in existing permit or consent order? (List)	Change due to production increase?	Completion Date(s)	
			Required	Projected

**This completes Section II of the SPDES Industrial Application Form NY-2C. Section I, which requires general information regarding your facility, and Section III, which requires sampling information for each of the outfalls at your facility, must also be completed and submitted with this application.**



# INDUSTRIAL APPLICATION FORM NY-2C

## Section III - Sampling Information

 Facility Name: **GMD SHIPYARD**

SPDES No.:

 Outfall No.: **001**

### 1. Sampling Information - Conventional Parameters

Provide the analytical results of at least one analysis for every pollutant in this table. If this outfall is subject to a waiver as listed in Table 5 of the instructions for one or more of the parameters listed below, provide the results for those parameters which are required for this type of outfall.

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (using the same format) instead of completing this page.

Pollutant	Effluent data						Units		Intake data (optional)			
	a. Maximum daily value		b. Maximum 30 day value		c. Long term average		d. Number of analyses	a. Concentration	b. Mass	s. Long term average value		b. Number of analyses
	1. Concentration	2. Mass	1. Concentration	2. Mass	1. Concentration	2. Mass				1. Concentration	2. Mass	
a. Biochemical Oxygen Demand, 5 day (BOD)	Please See Attached Data Sheets											
b. Chemical Oxygen Demand (COD)												
c. Total Suspended Solids (TSS)												
d. Total Dissolved Solids (TDS)												
e. Oil & Grease												
f. Chlorine, Total Residual (TRC)												
g. Total Organic Nitrogen (TON)												
h. Ammonia (as N)												
i. Flow	Value		Value		Value					Value		
j. Temperature, winter	Value		Value		Value					Value		
k. Temperature, summer	Value		Value		Value					Value		
l. pH	Minimum	Maximum	Minimum	Maximum						Minimum	Maximum	

### 2. Sampling Information - Priority Pollutants, Toxic Pollutants, and Hazardous Substances

a. Primary Industries: I. Does the discharge from this outfall contain process wastewater?

☒

Yes - Go to Item II. below.

No - Go to Item b. below.

II. Indicate which GC/MS fractions have been tested for:

Volatiles:

☒

Acid:

☒

Base/Neutral:

☒

Pesticide:

b. All applicants:

I. Do you know or have reason to believe that any of the pollutants listed in Tables 6, 7, or 8 of the instructions are present in the discharge from this outfall?

☒

Yes - Concentration and mass data attached.

No - Go to Item II. below.

II. Do you know or have reason to believe that any of the pollutants listed in Table 9 or Table 10 of the instructions, or any other toxic, harmful, or injurious chemical substances not listed in Tables 6-10, are present in the discharge from this outfall?

☒

Yes - Source or reason for presence in discharge attached

Yes - Quantitative or qualitative data attached

No

## SPDES No.:

**Outfall No.:** 001

**3. Projected Effluent Quality - Priority Pollutants, Toxic Pollutants, and Hazardous Substances**  
Provide analytical results of at least one analysis for each pollutant that you know or have reason to believe is present in this discharge, as well as for any GC/MS fractions and metals required to be sampled from Section III Forms, Item 2.a on the preceding page.

List the name and CAS number for each pollutant that you know or have reason to believe is present in the discharge from this outfall. For each pollutant listed from Tables 6, 7, or 8, provide the results of at least one analysis for that pollutant, and determine the mass discharge based on the flow rate reported in Item 1.i. For each pollutant listed from Table 9, or any other toxic pollutant not listed in Tables 6-10, you must provide concentration and mass data (if available) and/or an explanation for their presence in the discharge. Make as many copies of this table as necessary for each outfall.

Page of

[illegible]



**APPENDIX B – FACILITY INSPECTION FORMS**

Storage Area of: \_\_\_\_\_

[illegible]

**ABOVEGROUND STORAGE TANK WEEKLY INSPECTION LOG**  
**GMD SHIPYARD**

Storage Area of: \_\_\_\_\_

[illegible]

## DRAINAGE RECORD

### GMD SHIPYARD

Drain Located At: \_\_\_\_\_

Recorder's Name \_\_\_\_\_

[illegible]

Storage Area of: \_\_\_\_\_

[illegible]



**ABOVEGROUND STORAGE TANK WEEKLY INSPECTION LOG**  
**GMD SHIPYARD**

Storage Area of: \_\_\_\_\_

[illegible]

**APPENDIX C – SPILL CONTINGENCY PLANS**

**GMD SHIPYARD  
FACILITY RESPONSE PLAN**

<i>Section Number:</i>	<i>Policy and Procedures Title:</i>	<i>Policy and Procedures Number:</i>
<i>Revision Number: 1</i>	<b>TABLE OF CONTENTS</b>	<b>HSE-FRP-1</b>
<i>Prepared By: HSE</i>		<i>Page: i of iii</i>
	<i>Approved By: President</i>	<i>Effective Date: December 2014</i>

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**GMD SHIPYARD  
FACILITY RESPONSE PLAN**

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**APPENDIX D – RESPONSE NOTIFICATION FORMS**

**Appendix D. Emergency Notification Phone List.**  
**GMD Shipyard Facility, Brooklyn, New York.**

Activity	Name of Individual/Agency	Training	Title	Action Required	Alternate
All Pollution Prevention Activities	Kevin Nugent (347) 675-8876	24-Hour Hazardous Waste Operations in accordance with 29CFR 1910.120	Pollution Prevention Coordinator/Qualified individual(QI)	Command Control. Implement portions or entire facility Best Management Practices. BMP Plan based on conditions presented. Liaison with federal, State, and local agencies and complete Response Notification Form. Authority to commit funds required to clean spill. Overall planning and coordinate logistics with oil spill response organization. Delegate responsibilities to other facility response personnel.	Alex Gomez (201) 481-9902
All Emergency Response Activities	Kenneth Boothe (347) 533-0210	24-Hour Hazardous Waste Operations in accordance with 29CFR 1910.120	Spill Response Coordinator/Qualified individual(QI)	Responsibility include working with QI to support cleanup effort. Assume responsibilities of QI if necessary.	Carl Gomez (917) 302-6323
Public Relations	Michael Cranston/ GMD Shipyard	N/A	President	Public Relations. Coordinate with press and media. Track spill response remediation costs.	
In-House Facility Response	Total of 20 Facility Operators	8-Hour Hazardous Waste Operations in accordance with 29CFR 1910.120	Spill Management Team	First to respond to all emergencies. Immediate actions are to stop the source, mobilize the response equipment, and contain the release. For small releases, the spill management team will remove and cleanup the spill. For large releases, they will be relieved by the OSRO.	Oil Spill Removal Organization (MEG)
Contracted Facility Response	Miller Environmental Group (516) 369-4900 Over 100 Trained Response Personnel	40-Hour Hazardous Waste Operations in accordance with 29CFR 1910.120	Contract Oil Spill Removal Organization	Respond to all emergencies, when required by QI notification. Responsible for logistics support to the QI and for mobilizing all required equipment to respond to the average, maximum, and worst case discharges.	MEG will supply backup if conditions require additional support.
Facility Evacuation	BNYDC Protective Services (718)907-5900	Familiar with Operations	BNYDC Security	Responsible for coordinating Facility evacuation with local emergency services.	New York City Police Department (718) 636-6511
New York City Fire Department	Several battalions with Fire Department (718) 636-1700	All Battalions have attended Facility Fire Protection system training	New York City Fire Department	Respond to Facility fires and explosions. Capable of mobilizing form supply tanker truck onsite to supply form solution to the Facility fire suppression system. In addition, can supply fire boats to supply river water to Facility fire suppression system or combat fire from water.	Other Battalions within the NYCFD

**APPENDIX E – STANDARD OPERATING PROCEDURES**

# **STANDARD OPERATING PROCEDURE**

## **FOR**

### **NO. 2 FUEL OIL**

#### **1.0 PURPOSE**

This procedure was developed to aid Project Operator personnel in first aid and emergency response guidance for No. 2 Fuel Oil (Diesel Fuel) used at the Brooklyn Navy Yard Cogeneration Facility. Detailed transfer and handling procedures are discussed in the USCG Operations Manual.

#### **2.0 REFERENCE MATERIAL**

All Project Operator personnel shall refer to the following attached reference material prior to the use of No. 2 Fuel Oil:

- USCG Facility Response Plan.
- USCG Operations Manual.
- USEPA Facility Response Plan.
- SPCC and Emergency Response Plan.
- Spill Notification Phone List.
- No. 2 Fuel Oil Receiving/Transferring Checklist.
- Material Safety Data Sheet for No. 2 Fuel Oil.

#### **3.0 HEALTH HAZARDS**

Health hazards associated with No. 2 Fuel Oil includes:

- Inhalation or contact may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.

#### **4.0 SPECIAL CONSIDERATIONS**

The following special considerations should be adhered to when handling No. 2 Fuel Oil:

- Use in a well ventilated area. Use only explosion proof equipment if local exhaust venting is required.
- The use of contact lenses is prohibited when working with No. 2 Fuel Oil.
- Wear rubber gloves when handling No. 2 Fuel Oil to prevent skin contact. Verify the condition of the gloves prior to use. Discard all gloves which appear damaged. Supervision of deliveries will not require the use of gloves, since Project Operator personnel will not be handling No. 2 Fuel Oil.
- Wear chemical splash goggles and a face shield when handling No. 2 Fuel Oil to prevent eye contact with liquid.



## **5.0 FIRST AID**

If Project Operator personnel come into contact with No. 2 Fuel Oil the following guidance shall be used:

- If conditions permit, move the victim out of the area and warn others.
- Notify the Shift Supervisor to call for emergency medical care (Call 911).
- Apply artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult (oxygen located in the Control Room).
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substances, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- Keep victim warm and quiet.

## **6.0 EMERGENCY EQUIPMENT**

In addition to the Emergency Spill Kit located at Dry Dock 2, Project Operator personnel should place the following equipment in the vicinity of the transfer station prior to all No. 2 Fuel Oil transfers:

- Emergency eye wash.
- Running water.
- Rubber gloves, splash goggles, face shield, and overboots.
- Fire extinguishers.
- Life rings with safety line and life jackets.

The following emergency first aid supplies are available in the Control Room:

- First Responder Kit (medical supplies).
- 30-Minute Oxygen Emergency Unit.
- Wool Fire Blanket.
- Burn/Fire Blanket (6 ft. X 5 ft.).
- Stretcher.

## **7.0 RESPONSE PROCEDURES AND EQUIPMENT**

Response procedures and equipment vary depending upon the severity of the spill or release. The average most probable, maximum most probable, and worst case discharge scenarios are outlined in the FRP. The procedures described below apply to all discharge scenarios.

In the event of a spill or release, Facility Operator personnel will be the first to respond. In all cases the Spill Management Team (which will consist of the Facility Operator personnel working at the Facility at the time of the incident) will:

- notify the Shift Supervisor to call the Qualified Individual (QI);
- stop the source of the spill or release by stopping the pumps and closing the valves;
- warn others on the scene; and
- make every effort to contain the spill and begin the cleanup process with onsite Facility response equipment and materials.

Depending on the situation, the QI will determine if the oil spill removal organization (ORSO), Miller Environmental Group (MEG), will be called.

**For Spills of releases less than approximately 200 gallons and contained on land**, the Spill Management Team will contain and remediate the area with onsite equipment and materials. Upon completion, MEG will provide disposal services.

**For spills or releases greater than approximately 200 gallons or releases that are not contained (I.e., the spill has entered the surface water, sewer or soil)**, the QI will immediately notify MEG to contain and remediate the area. Upon notification, MEG will respond to the Facility within two hours by dispatching a manager, supervisors, foremen, marine personnel, equipment operators, and trained laborers in sufficient numbers to contain the reported spill at the direction of the QI. The Spill Management Team will contain and cleanup the spill or release with onsite equipment and materials until relieved by MEG.

If the spill has penetrated or bypassed the boom at the opening of the dry dock, skimmers and additional booms will be deployed in order to contain the spill. When the spilled material has been contained, cleanup will begin. Sufficient cleanup material such as absorbent pads, socks, and booms will be mobilized for delivery to the site by both boat and vehicle. Cleanup efforts will include the use of skimmers, boats with absorbent materials, and shore (dock area) deployment of absorbent materials. MEG will also deploy drums, tanks, and/or a barge, as required, to temporarily store the recovered spill material until disposal. In addition, MEG will clean all contaminated structures.

**For fires and/or explosions**, the Shift Supervisor should immediately call the New York City Fire Department (NYCFD) (Call 911). In addition, the Shift Supervisor should call the Brooklyn Navy Yard Development Corporation (BNYDC) Protective Services (852-1441) to evacuate the immediate vicinity within 0.5 mile in all directions. If conditions permit, Project Operator personnel will properly align the foam suppression system to the location needed. Project Operator personnel are required to meet the NYCFD when they arrive on the scene to brief them on the situation.

## **8.0 REPORTABLE QUANTITIES**

In the event of a No. 2 fuel oil spill or release to the environment, the following will be used to determine the reportable quantities:

- > 0 gallons in the river.
- > 5 gallons to the environment.

If the above conditions are met, The National Response Center (NRC) as well as the local and state agencies must be notified within 24 hours.

If the spill or release is completely held within a secondary containment and the total volume of the spill or release can be accounted for and cleaned up within 24 hours, the Federal, State, and local agencies need not be notified.

**APPENDIX F – EMERGENCY RESPONSE CONTRACTOR OF  
RECORD**

**APPENDIX G – EMPLOYEE TRAINING FORMS**

**GMD SHIPYARD  
BROOKLYN NEW YORK  
PERSONNEL TRAINING**

[illegible]

Date of Last

Update: \_\_\_\_\_

## Date: \_\_\_\_\_

[illegible][illegible]

**GMD SHIPYARD  
BROOKLYN NEW YORK  
SPILL MANAGEMENT TEAM TRAINING**

**USEPA  
SPILL PREVENTION, COUNTERMEASURE & CONTROL**

<b>Applicability:</b>	Facility Spill Management Team.
<b>Frequency:</b>	Annually.
<b>Initiating Authority:</b>	Company policy.
<b>Particip. Elements:</b>	Spill management team as described in the Spill Contingency Plan.
<b>Scope:</b>	Exercise the spill management team's organization, communication, and decisionmaking in managing a spill response.
<b>Objectives:</b>	<p>Exercise the spill management team in a review of:</p> <ul style="list-style-type: none"><li>• Knowledge of the response plan;</li><li>• Proper notification;</li><li>• Communications system;</li><li>• Ability to access a remedial contractor;</li><li>• Coordination of internal organization personnel with</li><li>• An annual review of the transition from a local team to a</li><li>• Ability to effectively coordinate spill response activity with the regulatory agencies; and</li></ul>
<b>Certification:</b>	Self-certification.
<b>Verification:</b>	U.S.Coast Guard, U.S. Environmental Protection Agency.
<b>Records Retention:</b>	5 years.
<b>Location:</b>	Records to be kept at the Facility.
<b>Evaluation:</b>	Self-evaluation.
<b>Credit:</b>	Plan holder should take credit for this exercise when conducted in conjunction with other exercise, as long as all objectives are met, the exercise is evaluated and a proper record is generated.

**GMD SHIPYARD  
BROOKLYN NEW YORK  
BEST MANAGEMENT PRACTICES**

**New York State Department of Environmental Conservation**

<b>Applicability:</b>	Facility with storm water runoff from Ship Repair and Maintenance Activities
<b>Frequency:</b>	Annually.
<b>Initiating Authority:</b>	Company policy.
<b>Particip. Elements:</b>	Facility owner and subcontractors.
<b>Scope:</b>	All new employees receive eight-hour facility specific training.  Environmental laws and regulation;  Pollution prevention concepts;  The goals of the BMP Plan; and  The content of the BMP Plan;  The implementation of Best Management Practices that are used to minimize contamination of waters of New York State; and  Spill Response Plan procedures.
<b>Objectives:</b>	Demonstrate the ability of personnel to implement BMP's.  Ensure equipment is in proper working order.
<b>Verification:</b>	New York State Department of Environmental Conservation
<b>Records Retention:</b>	1 year after permit expires.
<b>Location:</b>	Records to be kept at the Facility.
<b>Evaluation:</b>	Self-evaluation.
<b>Credit:</b>	Plan holder should take credit for this exercise when conducted in conjunction with other exercise, as long as all objectives are met, the exercise is evaluated and a proper record is generated. Credit should be taken for an actual spill response when these objectives are met, the response is evaluated, and a proper record is generated.